China Coop Aff

China Coop Aff 1

\*\*\* 1AC 4

1AC – Contention 1 – No Sino-US Space Coop Now 4

1AC – Plan Drafts 5

1AC – Miscalculation Advantage Draft 6

1AC – Cooperation Advantage Draft 11

1AC – Solvency Draft 15

\*\*\* Inherency 16

Inherency – No Coop Now 17

Inherency – No Coop Now – ISS 18

Inherency – No Coop Now – Wolf Clause (1/4) 19

Inherency – No Coop Now – Wolf Clause (2/4) 20

Inherency – No Coop Now – Wolf Clause (3/4) 21

Inherency – No Coop Now – Wolf Clause (4/4) 22

Inherency – AT – Status Quo Solves – Wolf Clause Expires 23

\*\*\* Space Race Advantage 24

Space Race Now (1/2) 25

Space Race Now (2/2) 26

US Losing Space Competitiveness To China 27

China Rising Now – Space 28

China Rising Now – Tech 29

Chinese Space Power High – General (1/2) 30

Chinese Space Power High – General (2/2) 31

Chinese Space Power High – China Would Win 32

China Weaponizing Now – General (1/3) 33

China Weaponizing Now – General (2/3) 34

China Weaponizing Now – General (3/3) 35

Space Race – US Posture Key (1/4) 36

Space Race – US Posture Key (2/4) 37

Space Race – US Posture Key (3/4) 38

Space Race – US Posture Key (4/4) 39

Space Race – US Exclusion Policy Drives Chinese Policy (1/2) 40

Space Race – US Exclusion Policy Drives Chinese Policy (2/2) 41

Space Race – Containment 42

Space Race – Space Conflict Inevitable Now 43

Space Race – Causes Miscalc (1/2) 44

Space Race – Causes Miscalc (2/2) 45

Space Race – Quick Attack 46

Space Race – Cyber Attacks 47

Space War – Escalates (1/2) 48

Space War – Escalates (2/2) 49

Space Race – Hegemony 50

Space Race – Hegemony 51

Space Primacy Good – Key To Hegemony 52

Space Race – Taiwan Scenario (1/4) 53

Space Race – Taiwan Scenario (2/4) 54

Space Race – Taiwan Scenario (3/4) 55

Space Race – Taiwan Scenario (4/4) 56

Space Race – CCP Collapse Scenario 57

Coop Solves – Space Race (1/3) 58

Coop Solves – Space Race (2/3) 59

Coop Solves – Space Race (3/3) 60

\*\*\* ASATs Advantage 61

Space Race – US Drives Chinese ASAT Acquisition (1/2) 62

Space Race – US Drives Chinese ASAT Acquisition (2/2) 63

Chinese Space Power High – ASATs 64

China Weaponizing Now – ASAT (1/2) 65

China Weaponizing Now – ASAT (2/2) 66

ASATs Bad – Impact Laundry List 67

ASATs Bad – US Retaliation/ War 68

ASATs Bad – US Retaliation/ War 69

ASATs Bad – Hegemony – China Asymmetrical Advantage (1/2) 70

ASATs Bad – Hegemony – China Asymmetrical Advantage (2/2) 71

ASATs Bad – Hegemony – China Will Take Space (1/2) 72

ASATs Bad – Hegemony – China Will Take Space (2/2) 73

ASATs Bad – Hegemony – US Hard Power (1/3) 74

ASATs Bad – Hegemony – US Hard Power (2/3) 75

ASATs Bad – Hegemony – US Hard Power (3/3) 76

ASATs Bad – Miscalc 77

ASATs Bad – Taiwan Scenario 78

ASATs Bad – Hegemony – Turns East Asian Allies 79

ASATs Bad – Causes ASAT Prolif 80

ASATs Bad – Space Debris – No Future Missions 81

Coop Solves – ASATs (1/2) 82

Coop Solves – ASATs (2/2) 83

\*\*\* Cooperation Advantage 84

China – Wants To Go To Space 85

China – Wants Coop With The US (1/2) 86

China – Wants Coop With The US (2/2) 87

US – Wants Coop (1/2) 88

US – Wants Coop (2/2) 89

Now Key – General (1/2) 90

Now Key – General (2/2) 91

Space Key To Cooperation (1/3) 92

Space Key To Cooperation (2/3) 93

Space Key To Cooperation (3/3) 94

Coop Good – Spill Over To Other Areas (1/3) 95

Coop Good – Spill Over To Other Areas (2/3) 96

Coop Good – Spill Over To Other Areas (3/3) 97

Coop Good – AT – China Is A Bad Partner (1/2) 98

Coop Good – AT – China Is A Bad Partner (2/2) 99

Coop Good – Laundry List (1/2) 100

Coop Good – Laundry List (2/2) 101

Coop Good – Miscalc 102

Coop Good – Space Peace 103

Coop Good – Space Peace 104

Coop Good – Peaceful China Rise 105

Coop Good – China Threat 106

Coop Good – Space Race 107

Coop Good – Space Tensions 108

Coop Good – Space Tensions 109

Coop Good – Chinese Militarization 110

Coop Good – Chinese Militarization 111

Coop Good – Chinese Militarization 112

Coop Good – Solves Trust 113

Coop Good – Solves Trust 114

Coop Good – Leadership 115

Coop Good – AT – Containment Good 116

Coop Good – Cost 117

Coop Good – Cost 118

Coop Good – NASA Benefits 119

Coop Good – Exploration (1/2) 120

Coop Good – Exploration (2/2) 121

Coop Good – Space Science (1/2) 122

Coop Good – Space Science (2/2) 123

Coop Good – Competitiveness (1/2) 125

Coop Good – Competitiveness (2/2) 126

Coop Good – Environment 127

Coop Good – Environment & Econ 128

Coop Good – Environment & Prolif 129

Coop Good – Energy 130

Coop Good – Energy, Relations & Economy 131

Coop Good – Prolif 132

Coop Good – North Korea 133

Coop Good – East Asia Peace 134

\*\*\* Relations Advantage 135

Relations Low Now – ASATs 136

Relations Low Now – ASATs 137

Relations Good – Extinction 138

Relations Good – Miscalc 139

Relations Good – Trade 140

Coop Solvency – Relations 141

Coop Solves Relations – Empirics 142

Coop Solves Relations – Space Key 143

Coop Solves Relations – Tech 144

Coop Solves Relations – Tech 145

Coop Key to Relations – Tension 146

\*\*\* US Soft Power Advantage 147

US Space Leadership Down – General (1/3) 148

US Space Leadership Down – General (2/3) 149

US Space Leadership Down – General (3/3) 150

US Soft Power Low – Coop Key 151

Coop Solves – Leadership 152

Coop Solves – Soft Power 153

Space Exploration Good – US Leadership 154

Space Exploration Good – Soft Power 155

Space Exploration Good – Soft / Hard Power 156

\*\*\* Solvency – ISS Mechanism 157

ISS – China Excluded Now (1/2) 158

ISS – China Excluded Now (2/2) 159

ISS – China Says Yes (1/4) 160

ISS – China Says Yes (2/4) 161

ISS – China Says Yes (3/4) 162

ISS – China Says Yes (4/4) 163

ISS – ESA Says Yes 164

ISS – ISS Says Yes 165

ISS – Other Countries Say Yes 166

ISS – Solves Small Steps Key 167

ISS – Solves Cost And Satellites 168

ISS – Solves Security Concerns & Costs 169

ISS – Solves Transparency 170

ISS – Solves Coop 171

ISS – Solves Relations (1/4) 172

ISS – Solves Relations (2/4) 173

ISS – Solves Relations (3/4) 174

ISS – Solves Relations (4/4) 175

ISS – Solves Innovation 176

ISS – Solves Laundry List (1/3) 177

ISS – Solves Laundry List (2/3) 178

ISS – Solves Laundry List (3/3) 179

\*\*\* Solvency – Mars Mechanism 180

Mars – Now is Key 181

Mars – US Wants To Coop With China 182

Mars – China Wants To Go 183

\*\*\* Solvency – General 184

Mission Planning – China Capabilities 185

Mission Planning – Key To Coop 186

Solvency – AT – Coop Fails – Common Standards – Key To Coop 187

Solvency – Coop – General – Lots Of Options 188

Solvency – 4 Step Plan – Coop 189

Solvency – Dialogue – Coop (1/2) 190

Solvency – Dialogue – Coop (2/2) 191

Solvency – Data Sharing – Solves Coop 192

China Say Yes (1/3) 193

China Say Yes (2/3) 194

China Say Yes (3/3) 195

China Say Yes – Staffed Missions 196

Coop Feasible 197

Coop Feasible – Empirically 198

Coop Feasible – AT – NASA Won’t Coop 199

Coop Feasible – AT – Suspicions (1/2) 200

Coop Feasible – AT – Suspicions (2/2) 201

Coop Solves – Spills Over To Relations 202

Coop Solvency – Now Key to Influence Chinese Space Policy (1/2) 203

Coop Solvency – Now Key to Influence Chinese Space Policy (2/2) 204

Now Key – Space Dragons (1/2) 205

Now Key – Space Dragons (2/2) 206

\*\*\*AT – Coop Bad – Militarization Turn 207

Non Unique – Espionage Now 208

Can’t Spy Through Coop 209

Can’t Spy Through Coop – Military and Civilian Separated 210

Can’t Spy Through Coop – No Disclosure 211

Won’t Militarize – Private Sector 212

Won’t Militarize – Tech Incompatible 213

\*\*\*AT – Off Case Args 214

Topicality – Space Exploration/Development 215

Topicality – Space Exploration 216

Topicality – Space Development (1/2) 217

Topicality – Space Development (2/2) 218

Security/Pan K Link Turn (1/3) 219

Security/Pan K Link Turn (2/3) 220

Security/Pan K Link Turn (3/3) 221

Status Quo Uses Security Logic (1/2) 222

Status Quo Uses Security Logic (2/2) 223

Coop Alt Actor CP Answer – China Key 224

Treaty CP Answers 225

Arms Control/Treaty CP Answer –No Verification And Constrains The US (1/2) 226

Arms Control/Treaty CP Answer –No Verification And Constrains The US (1/2) 227

China Soft Power Bad Answer – Coop Solves 228

Spending Answer – Burden-Sharing 229

Politics Aff – Plan Would Be a Win 230

Politics Aff – Wolf Link Trick (1/2) 231

Politics Aff – Wolf Link Trick (2/2) 232

Politics Aff – China Bashing Now (1/2) 233

Politics Aff - China Bashing Now (2/2) 234

Rollback/Wolf Clause Answer (1/2) 235

Rollback/Wolf Clause Answer (2/2) 236

Regime Legitimacy Bad Answer 237

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1AC – Contention 1 – No Sino-US Space Coop Now

The US is making overtures to China on cooperation, but hasn’t followed through with action

Wolf, Defense Technology Correspondent at Reuters, 2011

(Jim, “Analysis: Space: a frontier too far for U.S.-China cooperation”, Reuters, <http://www.reuters.com/article/2011/01/02/us-china-usa-space-idUSTRE7010E520110102>, January 2, Accessed July 3, 2011, NS)

Obama and Hu, in a statement in November 2009, called for "the initiation of a joint dialogue on human spaceflight and space exploration, based on the principles of transparency, reciprocity and mutual benefit." The statement, marking a visit by Obama to China, also called for reciprocal visits in 2010 of NASA's chief and "the appropriate Chinese counterpart." Bolden, who went to China as head of a small team, said discussions there "did not include consideration of any specific proposals for future cooperation" -- a statement apparently designed to placate Wolf, who will have a big say in NASA's budget. The Chinese visit to NASA did not materialize in 2010 for reasons that have not been explained. NASA representatives did not reply to questions but a Chinese embassy spokesman, Wang Baodong, said he suspected it was "mainly a scheduling issue." China is an emerging space power. Over 13 years starting in August 1996, it ran up 75 consecutive successful Long March rocket launches after overcoming technical glitches with the help of U.S. companies. China launched its second moon orbiter in October. In 2008, it became the third country after the United States and Russia to send astronauts on a spacewalk outside an orbiting craft. Beijing plans an unmanned moon landing and deployment of a moon rover in 2012 and the retrieval of lunar soil and stone samples around 2017. Chinese scientists have talked about the possibility of sending a man to the moon after 2020 -- more than 50 years after U.S. astronauts accomplished the feat.

1AC – Plan Drafts

MARS Text –

The United States federal government should substantially increase its exploration of Mars, including an offer to the People’s Republic of China of participation in a joint mission to Mars.

ISS Text –

The United States federal government should substantially increase its space exploration using the International Space Station, including an offer to the People’s Republic of China of participation in joint Internation Space Station missions.

Generic Text –

The United States federal government should substantially increase its exploration and development of space, including an offer to the People’s Republic of China of participation in joint human space exploration.

1AC – Miscalculation Advantage Draft

Contention \_\_\_\_ - Miscalculation

**China is beginning to challenge US hegemony in space now proving US dominance is not sustainable**

**Seedhouse,** aerospace scientist & PhD from German Space Agency's Institute of Space Medicine, 10

[Erik, aerospace scientist & PhD from German Space Agency's Institute of Space Medicine , “The New Space Race: China vs. the US” Springer and Praxis Publishing Co., <http://www.scribd.com/doc/31809026/The-New-Space-Race-China-Vs>, page 226, accessed6/31/11, HK]

It has been argued thai engaging Beijing in an arms race in space would initiate a spending extravaganza in China, with the result that the Chinese would bankrupt themselves in an attempt to keep up with the US. While there is some substance to this analogy, it can be argued China has no reason to engage in a race to weaponize space because no matter how much money is spent, it could never hope to keep up with or outpace the US. Additionally, severe structural weaknesses underlie China's economic growth. For example, it can be argued that many aspects of China's economic and military progress are exaggerated. A case can also be made that China has a greater commercial interest in the rest of the world than it does an ideological interest. Finally, a strong argument can be made that China has an interest in a healthy US, which can purchase its products and borrow its money. Put simply, China does not want to *bury* the Americans: it wants to *buy* the Americans, and this cannot happen if hostilities occur. Beijing's ASAT test in January, 2007.revealed the darker side to China's intentions in space. The test convinced many in the US, most of whom didn't need much persuading, that China's space efforts pose a threat not just to American prestige, but to national security also. The hawks waving the red flags on the subject of Chinese military space capabilities supported their claims by citing official Defense Department documents, suggesting that China is pursuing the development of all sorts of ASAT weapons, ranging from basic KKVs to stealthy parasitic microsatellites. The latter weapon would be launched into orbit, where it would rendezvous and attach itself to an American satellite. Then, it would lie in wait until it was required, before blowing itself up, thereby killing its target in an event reminiscent of a scene from a Tom Clancey novel (Panel 10.3)! Dubious sources notwithstanding, China's ASAT demonstration indicated to the TV world that it could, if it so chose, destroy US satellites in LEO. Equally, the US.with heir demonstration of a modified missile-defense interceptor that destroyed a US satellite, demonstrated that it, too, could destroy LEO satellites. Having crossed the \SAT Rubicon, and with the arrival of the Obama Administration, China and the US now face fundamental choices concerning the deployment and use of ASAT capabilities. While the US possesses a far more adept ASAT capability than the Chinese, Washington is also more dependent on space assets than Beijing, and :therefore has more to lose in a space war. Furthermore, China's relatively small jcpcndcncc on space, which compromises its military capability, may actually confer i potential relative near-term offensive advantage, since China has the ability to jestroy more US space assets than vice versa, it is an asymmetrical advantage that nay persist for a while. Although the US will undoubtedly attempt to neutralize China's asymmetrical advantage by devising ways of inflicting more damage upon China's LEO assets, the Chinese, despite limited technology and financial resources, ;an easily counter the increased US threat by simply deploying an ASAT fleet. The deployment of fleets of A SATs similar to the one tested in 2007, armed with microwaves and lasers, could significantly reduce the effectiveness of US fighting forces. Simply by destroying half a dozen satellites, the Chinese would create a LEO debris field travelling at 27,000 km/h with the destructive potential to devastate dozens of US satellites, thereby significantly weakening US forces. The momentum of US space weaponization is another issue increasing the likelihood of a space-borne arms race. Tn January, 2001, a congressionally mandated space commission called for the President to have the option to deploy weapons in space to deter threats, and. if necessary, to defend against attacks on US interests.3 This request was followed in 2002 by the US withdrawal from the Anti-Ballistic Missile (ABM) Treaty. Withdrawal from the ABM Treaty was followed by the publication of the US Air Force's (USAF's) vision of how counterspace operations could not only help "achieve and maintain space superiority but also permit the freedom to attack as well as the freedom from attack" in space.1 Since the USAF's announcement, the US has been pursuing a number of military systems that could attack targets in space from Earth, or targets on Earth, from space. To China, the US's deployment of the Ground-Based Midcoursc Missile Defense (GMD) system represents a first step towards space weaponization.' The most recent test of the GMD occurred at the end of 2008. in an exercise demonstrating exoatmospheric. multiple-kill vehicles (MKVs), airborne lasers, and interceptors. Further tests will develop what the Chinese fear will be a robust, layered missile defense system capable of neutralizing China's fewer than two dozen single-warhead ICBMs capable of reaching the US. Such a system could be used not only to strategically blackmail China, but also to give the US much more freedom to intervene in China's affairs, such as undermining Beijing's efforts to reunify

The Chinese challenge and space militarization is only a response to the perceived threat of the United States

MacDonald, Council on Foreign Relations, ‘8

(“China, space weapons, and U.S. security” By Bruce W. MacDonald, Council on Foreign Relations, 2008, <http://books.google.com/books?hl=en&lr=lang_en&id=o0GkabrNftIC&oi=fnd&pg=PP2&dq=china+space&ots=OTkniE7uA-&sig=wC4ye20QpZY-ECCnrpPTf-Tr9yY#v=onepage&q&f=false>, p. 3, 6.30.10, SWolff)

In a number of fora and military writings, China has unofficially indicated that the United States should not underestimate China in space or its ability to respond to U.S. military space initiatives that China perceives as a threat. Chinese specialists have stated that, in addition to protecting their satellites against U.S. offensive capabilities, China will develop a deterrent space force if there is no change in U.S. space policy, which they see as shunning any restrictions and reflecting U.S. attraction to space dominance. They have suggested that China would be prepared to deploy sufficient offensive counterspace capability to build confidence in its ability to deter U.S. use of weapons against Chinese space assets. This would not require China to match U.S. space-force deployments, but to have enough to deter. In general, as the CFR-sponsorcd Independent Task Force report on U.S.-China relations noted in 2007, "China does not need to surpass, or even catch up with, the United States in order to complicate U.S. defense planning or influence U.S. decision-making in the event of a crisis in the Taiwan Strait or elsewhere." This could reflect Chinese thinking on space weapons, as well. China has openly announced its intention to build "informationalized armed forces and being capable of winning informationized wars by the mid-twenty-first century;"\* offensive counterspace capabilities would be an important component in this capability. Coordinating and executing any such attack would be difficult and fraught with danger for China. Some are concerned that an action-reaction cycle involving space weapons could result in an "arms race in space," even without actual conflict, making both the United States and China worse off than if neither went down this path.

**Chinese Space militarization will be grounded in ASATs – this includes first and second strike capabilities**

**Shixiu, Senior Fellow Academy of Military Sciences of PLA, 7**

(Senior fellow for the Institute for Military Thought – PLA – China US relations specialist, Deterrence Revisited: Outer Space, China Security Winter 2007 pp. 10, <http://www.wsichina.org/cs5_1.pdf>) AC

First and foremost, a deterrent in space will vigorously maintain “active defense” as its central strategy as it has for all other areas of national defense. Active defense is “defensive” but also “active.” It is defensive in that China will never conduct a first strike or take on offensive stance and will make every effort to prevent others from attacking China in space. That is, China will maintain a stance of second strike. But the Chinese strategy must also be active– and require China to possess the ability to launch “effective” counterattacks. In other words, an active defense will entail a robust deterrent force that has the ability to inflict unacceptable damage on an adversary. An effective active defense against a formidable power in space may require China to have an asymmetric capability against the powerful United States. Some have wondered whether a defensive policy applied to space suggests that China’s possession of a robust reconnaissance, tracking, and monitoring space system would be sufficient for China to prevent an attack in space and would be in line with China’s “doctrinal” position of “defensive” capabilities. An effective active defense strategy would include the development of these systems but would also include anti-satellite capabilities and space attack weapon systems if necessary. In essence, China will follow the same principles for space militarization and space weapons as it did with nuclear weapons. That is, it will develop anti-satellite and space weapons capable of effectively taking out an enemy’s space system, in order to constitute a reliable and credible defense strategy. An active defense strategy will also include an intensification of civilian defense preparations against possible space attack if and when that possibility becomes apparent.13 China will need to use the vast expanse of its territory and its high-tech achievements to keep its second-strike capabilities in secrecy. In short, while China resolutely opposes the weaponization of space, it will develop its own space weapons if the United States does so first. The guiding principle for the development of new weapon systems is the following: if an adversary has developed a new weapon and is prepared to use it in the future battlefield, China will attempt to develop the same kind of weapon. This holds true regardless of whether the battlefield is on land, sea, air or space.

**Those ASATs will be used in any conflict over Taiwan and ensure escalation**

**Friedman, Naval Institute Guide to World Naval Weapon Systems author, ‘07**

(Norman, March 2007, U.S. Naval Institute Proceedings, 0041798X, Mar2007, Vol. 133, Issue 3 “War in Space?” EBSCOhost, accessed 7/1/11, BLG)

**The network approach to such tactics is not to retreat to the older ones of mass, because mass is still unaffordable. Instead, it is to gather and correlate more information. Technology may not yet be up to the correlation function, but we can imagine what it would be**. For example, we can imagine setting up pervasive and persistent monitoring. **We would automatically obtain images of insurgents attacking, even if we could not respond in real time. The images in turn could be used to track particular individuals identified as insurgents, and that tracking in turn would make interception possible**. Whether such operation is practical now is another question, but we should be thinking through the implications of the style of warfare we are adopting. **There are real consequences if we change styles (transform) in a half-baked way**. **When they decided that shooting down satellites was a good way to demonstrate their power, and thus to deter us from protecting Taiwan, the Chinese military leadership probably did not realize how far it had gone in the same direction we are following. China is no longer the desperately poor country that had to use human wave attacks in Korea. It is buying expensive technology, and it. like us, cannot have both numbers and the best information technology. If the Chinese do attack Taiwan or anywhere else, they will need good situational awareness, which will mean air and satellite reconnaissance on a real-time basis.** Losing their satellites will not do them enormous good, and it would be naive for them to imagine (hat they can fight a modern information war without such resources. **It may be up to us to make this truth obvious, but it would also be up to us to neutralize the Chinese antisatellite system.**

The US will strike back – that ensures nuclear extinction

Tellis, Senior Associate at the Carnegie Endowment, 8

(Ashley, Senior Associate at the Carnegie Endowment, “China’s Space Capabilities and U.S. Security Interests,” October 2008, Carnegie Endowment For International Peace, <http://www.carnegieendowment.org/2008/10/01/china-s-space-capabilities-and-u.s.-security-interests/68r>, JSkoog)

Third, the growth of China’s space and counterspace capabilities contributes to raising the costs of American victory in any future conflict with Beijing. Should the United States find itself in an unlimited war with China, the outcome cannot be in doubt: Washington will win such a conflict and perhaps even win “decisively”, if there are no restraints imposed on its use of force. The presence of nuclear weapons, however, ensures that such unlimited conflicts are thankfully unlikely. Assuring victory in a limited war with China, however, becomes more problematic not because the United States suddenly loses all its military advantages in such a scenario but because a limited conflict, over Taiwan or elsewhere, would involve restrictive rules of engagement and other political-operational constraints which, even if not ultimately subversive of victory, would nonetheless increase its burdens. Because most future conflicts that can be envisaged with China involve limited wars of some kind or another, Beijing’s increasing space and counterspace capabilities – if well used – could become critical, if not decisive, in some quite representative scenarios. Fourth, China’s evolving space and counterspace capabilities promise to expand the dimensions of the battlespace – virtually and physically – in the context of any future Sino-American conflict. Because space-supported conventional operations will become critical for victory for both sides; because the space component of military actions – that is, the space, ground, and link segments in their totality – is conspicuous, highly valuable, vulnerable, and contains relatively few nodes; because defensive and offensive counterspace operations may be hard to distinguish especially in the early phases of a conflict; because both sides will seek to competitively use space to expand their situational awareness while denying the same advantage to the adversary; and, because Chinese operational planning, given its overall conventional weakness, calls for counterspace operations as an integrated element of its military response, it is likely that a future Sino-American conflict, even if intended to be limited in a political sense, will be unable to either bound its offensive operations to the local battlefield alone or resist the temptation to launch crippling attacks first. The demands of victory, even in limited wars, will thus require that the force applied – in both material and virtual senses – range far beyond the physical battlefront to the “rear”: in the adversary’s homeland, possibly in territories of third-parties, and certainly in the realms of space, electronic combat, and computer network operations. Moreover, it may create strong incentives for “first strikes” because of the perceived benefits to conventional operations arising from being able to blind an adversary decisively, even if only for a short time. In such circumstances, ensuring that a future limited war between China and the United States stays restricted will itself become a significant challenge.

Status quo arms race perpetuates ensures miscalculation through reactionary policies

MacDonald, Council on Foreign Relations, ‘8

(“China, space weapons, and U.S. security” By Bruce W. MacDonald, Council on Foreign Relations, 2008, <http://books.google.com/books?hl=en&lr=lang_en&id=o0GkabrNftIC&oi=fnd&pg=PP2&dq=china+space&ots=OTkniE7uA-&sig=wC4ye20QpZY-ECCnrpPTf-Tr9yY#v=onepage&q&f=false>, p. 3, 6.30.10, SWolff)

In a number of fora and military writings, China has unofficially indicated that the United States should not underestimate China in space or its ability to respond to U.S. military space initiatives that China perceives as a threat. Chinese specialists have stated that, in addition to protecting their satellites against U.S. offensive capabilities, China will develop a deterrent space force if there is no change in U.S. space policy, which they see as shunning any restrictions and reflecting U.S. attraction to space dominance. They have suggested that China would be prepared to deploy sufficient offensive counterspace capability to build confidence in its ability to deter U.S. use of weapons against Chinese space assets. This would not require China to match U.S. space-force deployments, but to have enough to deter. In general, as the CFR-sponsored Independent Task Force report on U.S.-China relations noted in 2007, "China does not need to surpass, or even catch up with, the United States in order to complicate U.S. defense planning or influence U.S. decision-making in the event of a crisis in the Taiwan Strait or elsewhere." This could reflect Chinese thinking on space weapons, as well. China has openly announced its intention to build "informationalized armed forces and being capable of winning informationized wars by the mid-twenty-first century;"\* offensive counterspace capabilities would be an important component in this capability. Coordinating and executing any such attack would be difficult and fraught with danger for China. Some are concerned that an action-reaction cycle involving space weapons could result in an "arms race in space," even without actual conflict, making both the United States and China worse off than if neither went down this path.

The large amount of coutires involved in space ensures extinction through global draw in

MacDonald, Council on Foreign Relations, ‘8

(“China, space weapons, and U.S. security” By Bruce W. MacDonald, Council on Foreign Relations, 2008, <http://books.google.com/books?hl=en&lr=lang_en&id=o0GkabrNftIC&oi=fnd&pg=PP2&dq=china+space&ots=OTkniE7uA-&sig=wC4ye20QpZY-ECCnrpPTf-Tr9yY#v=onepage&q&f=false>, p. 3, 6.30.10, SWolff)

While China represents the most prominent challenge to U.S. space assets, it is not the only one. Russia and others are taking another look at space to counter U.S. military capability, and friendly countries such as India are reexamining space's role in this new era, in at least partial response to China's 2007 test. India's army chief of staff has stated that "the Chinese space program is expanding at an exponentially rapid pace in both offensive and defensive content," and another Indian general has observed that "with time we will get sucked into a military race to protect our space assets and inevitably there will be a military contest in space."8 Such actions could possibly trigger responses from other regional adversaries as well. The strategic landscape of this new space era is largely unexplored and poorly understood. Nonetheless, certain objectives arc clearly in the interest of the United States. The risks inherent in space conflict, where vital U.S. interests are at stake, suggest that preventing space conflict should be a major U.S. security objective, and that all instruments of U.S. power, not just military measures, should be drawn upon to this end. The United States needs to deter others from attacking its space capabilities and bolster an international space regime that reinforces deterrence, the absence of conflict in space, and the preservation of space as an environment open to all. Such a regime would allow the United States to continue reaping the critical information and service benefits that U.S. military space assets provide.

1AC – Cooperation Advantage Draft

Contention \_\_\_ - Cooperation

China wants cooperation now – US policy is the only thing stopping productive relations

Martina, Reuters correspondent on Chinese international affairs, 11

(Michael, Reuters, “China astronaut calls for U.S. cooperation”, 4/29/11, <http://www.reuters.com/article/2011/04/29/us-china-space-idUSTRE73S4BS20110429>, accessed 7/1/11, CW)

(Reuters) - China's most renowned astronaut said on Friday his country and the United States should make good on their presidents' promises to cooperate in space. "I think the two countries should proactively implement the intent expressed in the joint communique to eliminate obstacles and promote exchange and cooperation in our space programs," Yang Liwei, now the vice director of the country's Manned Space Engineering Office, said. Efforts at U.S.-China cooperation in space have failed in the past decade, stymied by economic, diplomatic and security tensions, despite a 2009 attempt by President Barack Obama and his Chinese counterpart, Hu Jintao, to launch collaboration3. Obama and Hu, in a statement in November 2009, called for "the initiation of a joint dialogue on human spaceflight and space exploration, based on the principles of transparency, reciprocity and mutual benefit." U.S. fears over national defense and inadvertent technology transfer have proven to be major roadblocks, particularly after Beijing carried out an anti-satellite test in January 2007, using a ground-based missile to destroy one of its inactive weather satellites. Yang, considered a hero of China's ambitious space program and the first from his country to enter space, made the statement during a carefully controlled media visit to China's astronaut training facility in the western suburbs of Beijing. There, journalists were ushered through an echoing hall housing three new space flight training simulators, none in use by China's 24 astronauts. But China is pushing forward without the United States, its funding in the face of NASA scale-backs and its cooperative efforts with Russia and other countries possibly constituting the next best hope for the future of space exploration.

**The US policy of exclusion is forcing China into a cold war style arms race that uniquely kills relations**

**Jinnette, Lieutenant Colonel, 9**

(James G., Strategy Research Project, “US China Policy: Time for Robust Engagement”, p. 18-19, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA497538) PG

Space is another critical shared arena of potential interest-based engagement which must be addressed immediately because of its perceived strategic importance to both China and the US. As America sees its preeminence in space erode with ever-increasing Chinese efforts to dominate space in its own way, China recognizes that space offers it an asymmetric advantage which may help it counter the US during any eventual conflict. Because China depends on access to resources from sea lanes, its primary geopolitical dilemma is maritime power. Quite simply, China views the US Navy as its primary threat. But China well knows how much America’s Navy utilizes space assets to perform its mission, and sees unique opportunities in space to counter the threat to its economic stability.46 As George Friedman observes, “from the Chinese point of view, the denial of space to the United States would undermine American denial of the seas to China.”47 For this reason, China has accelerated its efforts in space; it has destroyed a satellite, conducted a manned spacewalk, and has plans to send an unmanned rover to the surface of the Moon with manned mission to follow years later. 48 Reacting to these developments, experts within the Obama team have considered removing some barriers which exist between NASA and the US Military’s space program to find economies and accelerate NASA’s manned space flight timetable.49 On both sides of the Pacific, space is viewed as a key strategic arena, and both China and the US are taking aggressive steps to gain and or maintain dominance of space to protect their individual national interests. Faced with these developments, avoidance of a cold-war style standoff in space may become impossible unless US policy makers immediately undertake assertive efforts to find an interest-based approach towards cooperative engagement with China in the space arena. If the United States misses the opportunity to cooperate with China in a growing international space competition, it could suffer an erosion of its leadership over the long term.50

No cooperation over space ensures that any attempt for relations will fail – that threatens overall security and Asian stability

Hitchens and Chen 8

(Theresa, Center for Defense Information, World Security Institute and David, CENTRA Technology, Inc, “Forging a Sino-US ‘‘grand bargain’’ in space” Space Policy 24 (2008) pg. 128–131, Available Online at Sciencedirect.com, Accessed June 28, 2011, EJONES)

In Washington’s space security community the debate has coalesced around the question of whether the future of Sino-US relations in space should more closely resemble arms control or an arms race—illustrated by the intercepts and destruction of satellites by both nations a year apart. Whatever direction Washington and Beijing take in their nascent military space competition is certain to be followed by other major and emerging space powers. Unfortunately, the existing trend in both nations is for promoting an offensive space strategy aimed primarily at one another. With a new US administration, whichever candidate enters office will face the challenge of finding viable alternatives to the anti-satellite arms race that lies at the end of the present course, an outcome that would be in neither party’s interest. The incoming president might avoid such a security dilemma with China by utilizing the full range of US soft power, backed by realistic hard power consequences. This will require the incoming administration to expand its understanding of what constitutes a space issue, and to develop a deeper knowledge of what motivates China’s leadership. Using both persuasion and dissuasion to craft a kind of ‘‘grand bargain’’ with China regarding space, the next president may be able to steer Sino-US competition toward trade, economics and sport, rather than military oneupmanship. Accomplishing this would strengthen US national security and international stability in the Pacific region.

**Strong relations is beneficial for both countries – solves transparency, trade deficit, regional stability, and hegemony**

**Zhou, Center for Space and applied Sciences, 8**

(Yi – Chinese Academy of the Sciences and Professor at George Washington University, Perspectives on Sino-US cooperation in civil space programs, Science Direct, Space Policy 24 (2008) 132-139) AC

On the other hand, some commentators in the USA worry that cooperation with China will somehow compromise US economic and political progress and even US national security [7]. However, there are several potential benefits for the USA which should be given greater consideration: \_ Benefits for geopolitical issues and global stability. A country’s strategic interests may provide the primary motivation for engaging partner nations in cooperative space ventures. The International Space Station (ISS) is a good example of this. China and the USA are both important countries and a stable relationship between them is a key factor in global stability. Space could be a focal point for promoting this kind of stability. Several European countries and Russia have undertaken cooperative activities in space with China to satisfy their ARTICLE IN PRESS geopolitical demands and other interests. Chinese participation in US-led space exploration would send a strong signal to the world of good US–China relations [8], which would be good for US international relations and would provide geopolitical benefits. \_ The United States will be able to understand more about China’s space development and direction through actual cooperation. At the moment the USA observes China’s space policy and capabilities through statements in China’s white papers. But studying one paper every five years is too limited and does not provide sufficient detail. Some American consulting and research institutions may simply rely on graduate students’ superficial papers to try to gain insight into the direction of China’s space development. These are not full-scale or always entirely accurate, and may sometimes result in misunderstandings. If NASA signed an agreement with CNSA and began joint space projects, they would more easily and directly understand China’s space activities and directions. They may even be able to make some good suggestions for China’s space projects and policies. These win–win suggestions should be readily adopted by China’s policy makers to extend the two countries’ space and national benefits. \_ Extending US opportunities for scientific discovery. Scientists in the USA have many interesting ideas and proposals for space science and space exploration, but the US space budget, though huge compared with that of other countries, is still limited. If the USA were to cooperate with China in space science and space exploration, there would be more opportunities for US scientific discovery. For example, in the China–ESA cooperative Double Star Exploration Program, China supplied the launch service and satellite. ESA supplied the back-up scientific instruments of the Cluster mission on the satellites. This helped ESA obtain more scientific data for research through the added payload. Greater research results were achieved. ESA’s instruments were valued at h800 000, which alone certainly cannot support a major new European science mission. \_ More choices and back-up for the USA. Space exploration is an inherently risky activity in which the element of risk can be managed and mitigated but never eliminated. It is necessary for any country to spread and manage risk. More back-up means greater safety. International cooperation can be used to duplicate capabilities which ensure that failure in one area is unlikely to jeopardize the entire mission or project. The most obvious example of this point today is the ISS’s reliance on the Space Shuttle and the Soyuz for transporting humans to the station. In the next 20 years the USA and China will be realizing ambitions to fly to the Moon. By cooperating with China, this additional back-up would lower the risks involved in human spaceflight. For example, if Americans return to the Moon and meet with an accident, the Chinese lunar project or crew could supply assistance as a back-up. Usually, such arrangements are discussed and integrated from the very beginning, in the design phase. Unfortunately that does not seem very likely under current circumstances. \_ Savings on the cost of US space projects to free up funds for more missions. Space science and space exploration activities are all extremely expensive, whether human or robotic. It is sometimes a waste of money and resources for different countries to explore the same unknown with the same scientific goals. Humans around the world should definitely share in pursuing these missions. In contrast, duplicated efforts will result in negative byproducts, such as more space debris and an increased perception of a space race. China’s space launch and satellite ability has advanced greatly. Its space budget is also very stable, although total funding is not very high. It is believed that China’s civil space budget will grow continually over the next 15 years. If the USA can supply some instruments to or engage in joint research with China, it will be able to save significantly on mission costs associated with instrument development and launch. The USA would thus have more money for other worthwhile projects which other countries do not have the ability to do at present. This would obviously help the USA maintain its ‘‘space leadership’’. \_ Some space research, inherently global in nature, involves targets in geographic locations that are important to US interests. Earth observation research is a good example. China’s Earth observation data and other useful data and research achievements could enrich US research models or pools in the same fields. Scientists from both countries need to integrate data for research and development. Another example is that US scientists may need China’s ground-based magnetic storm data to perfect their space weather prediction model. It will be very helpful to both countries to undertake joint research in these areas. \_ Benefits for the US space industry. China is a very big market. China’s GDP increases by over 10% per year [9], which also means very rapid development and lots of business opportunities. The USA’s space industry and its other technology-intensive products are more obviously competitive than China’s. If Congress were to assume a more positive posture, the US space industry would be able to expand into China’s market and reap significant benefits. This would help to reduce the USA’s trade deficit as well. Europe has already entered China’s space market and received economic benefits in space business and other areas.

Sino-U.S. relations are key to solve for human survival

Hays, former Air Force Lieutenant Colonel, 2009

(Peter L., former Air Force Lieutenant Colonel and Associate Director of Eisenhower Center for Space and Defense Studies, “Space and Sino-American Security Relations”, Space Defense: Scholarly Journal of the United States Air Force Academy’s, Volume 2, Number 3, Winter 2009, p.16-17, <http://web.mac.com/rharrison5/Eisenhower_Center_for_Space_and_Defense_Studies/Journal_Vol_2_No_3_files/Space%20and%20Defense%202_3.pdf>, accessed 7/6/11) EK

Addressing four issue areas can help provide context and focus for these concerns: contrasting Chinese and American views of space and comparing the place of space during the Cold War with its role in the current global security environment; reviewing the evolution of security space capabilities and superpower space arms control; evaluating the role of space capabilities in Sino-American security interrelationships, particularly with respect to a potential conflict over Taiwan; and assessing the prospects for a range of possible cooperative ventures and transparency- and confidence-building measures (TCBMs). Defusing space apprehensions will be difficult and there are currently several worrisome trends, but space holds unique potential to help define the Sino-American security relationship and shape the very future of humanity. If Beijing and Washington can work towards resolving or at least lessening space tensions they will not only better manage their overall relationship but also open more opportunities to use space for the benefit of all humanity through pursuit of genuinely cooperative spacepower objectives such as joint science and exploration missions, generating wealth in space, harvesting energy from space, and, ultimately, improving the odds for humanity’s survival by better protecting Earth and creating capabilities to become a multi-planetary species.

1AC – Solvency Draft

Contention \_\_\_ - Solvency

China will say yes – Official Chinese announcements prove

Hoffman, Daily Tech, 7

(Michael, staff editor at Daily Tech, Daily Tech, “China wants to join International Space Station Project”, 10/16/7, <http://www.dailytech.com/article.aspx?newsid=9290>, accessed 6/30/11, CW)

Chinese space officials today announced the country is still willing to work alongside the United States on extraterrestrial endeavors, especially the International Space Station. "We sincerely hope to conduct cooperation with the United States in the field of space," said Li Xueyong, Vice Minister of Space and Technology. "At some point we hope to take part in the activities relating to international space stations." Sixteen nations are currently involved in the ISS project, but China is not one of them even though the country has one of the fastest growing space programs in the world. China would ultimately like to have an astronaut stationed on the ISS in the future, but must convince the United States and other partners to allow a communist nation to be allowed to participate in the project. Li did not clearly specify how China hopes to help the participating nations work on the ISS. State media in China reported the country plans to launch its first lunar probe before November, only weeks after Japan launched one into orbit. In 2003, China became the third nation to successfully launch an astronaut into orbit with no help from other nations. There is growing concern over the country's expanding space program, which reached a new level after China announced it had destroyed an old satellite last January by shooting a land-based missile to destroy it. Critics of the launch claim China could theoretically launch a missile to destroy active military satellites, though Chinese officials still claim the nation has only peaceful plans for space.

ISS cooperation is the only way to solve – increases transparency and solves relations

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 58-59) EK

Finally, the U.S. could be more accommodating to Chinese participation in cooperative international ventures, the most prominent example being the International Space Station (ISS). Given China’s thirst for prestige, the Chinese government would likely be eager to cooperate and may even be willing to increase transparency or engage in military space discussions in return for becoming a member of the ISS. For the U.S., the ISS would serve as a medium to cooperate with China in what is essentially neutral territory and in an international setting whereby mutual suspicions may be tempered. If for nothing else, the idea of a Chinese and American astronaut working in tandem onboard the ISS may give a renewed public desire for space cooperation. Part of the resistance to this move so far has, among other things, been fears of exposing China to new and advanced space technology. Yet, considering the U.S. is reducing its role in the ISS and will be relying solely on Russian spacecraft for transportation, valued U.S. space technology may not necessarily be at risk. There is in fact a relatively straightforward way to engage China in the ISS, while initially reducing the threat of technological espionage. In 2010, reports surfaced that the Russian Federal Space Agency had initiated discussions with their Chinese counterparts on using the Chinese Shenzhou vehicles as backups for the Russian Souyuz spacecraft, which will be the only means to ferry crews to the station moving forward. 173 Although the discussions amounted to nothing, the idea presented is a viable first step. By allowing China to shuttle international astronauts to the ISS in their own spacecraft, the fear of technology espionage would be greatly reduced, while still allowing China to gain prestige by being an official contributor. This could provide a gateway to expanded cooperation if deemed beneficial and successful. The support of other international partners would need to be sought, which may be challenging for countries like Japan given political animosities, yet Russia is already a close space partner with China and the E.U. has expressed their willingness to invite China in as an ISS contributor. 174 Pursuing this path would likely resonate well with China’s leadership because it is a clear sign that the U.S. is not trying to prevent or complicate China’s rise as a spacefaring nation and is willing to initiate actions to build communication and trust.

\*\*\* Inherency

Inherency – No Coop Now

No plans in the status quo to cooperate with China over space activities

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. 4-5, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA539619, accessed 6/29/11) EK

The idea here is gaining a partner versus a competitor. Despite improvement in diplomatic and economic relationships between the U.S. and China, there has been very little initiative from the U.S. in entering into cooperative efforts with China in space activities. In fact,it was reported by Michael Griffin, the National Aeronautics and Space Administration’s (NASA) current administrator, that the Bush administration failed to approve an “overture to China for a cooperative U.S.-China space mission” in late 2008.26 Opening the doors toward increased cooperation with China in the space endeavor could present some attractive benefits. First and foremost, communication would improve between the two countries on space matters which would be essential in ultimately preventing further uncoordinated direct-ascent ASAT type activities. Currently, there is essentially no dialogue between the U.S. and China regarding military space issues.27 Another advantage of space cooperation is cost. The U.S. and China share similar goals, like returning to the Moon and eventually pursuing a manned mission to Mars. Space is expensive, so why not share resources and capabilities in the pursuit of such activities?

NASA and China have no plans to cooperate- China is building their own space station

New Scientist ‘10

(11/6/2010, New Scientist, 02624079, 11/6/2010, Vol. 208, Issue 2785 “Stuff the ISS” EBSCO host 7/1/11 BLG)

UNDAUNTED by NASA's cool response to its interest in the International Space Station, China is going it alone. It has announced plans to build its very own crewed space laboratory by 2020. The news comes hot on the heels of a visit to China by NASA administrator Charlie Bolden that failed to produce any plans for cooperation with the US in space. Some US lawmakers, including congressmen Frank Wolf and John Culberson, oppose forging closer space ties with China. Such critics question the intent of its space programme, which appears to be run by the military, and note the dual-use nature of much space technology. China, meanwhile, has been expanding its space capabilities, and, on 27 October, officially launched a project to develop a space station by 2020. The station will have research applications, including studying living conditions for astronauts, reports the Xinhua news agency. China's steady investments in human space flight "make it very clear they are going to be in space in terms of a human presence and are going to be there for a long time", says Dean Cheng, an analyst at the Heritage Foundation in Washington DC. China plans space station by 2020 The announcement comes hot on the heels of a visit by NASA administrator Charlie Bolden that failed to produce any plans for cooperation with the US in space

Inherency – No Coop Now – ISS

ISS and other cooperation blocked now

Cyranoski, Asia-Pacific correspondent at Nature Publishing Group, 11

(David, Scientific American, “China Unveils Its Space Station”, 5/4/11, <http://www.scientificamerican.com/article.cfm?id=china-unveils-its-space-station>, accessed 6/30/11. CW)

The International Space Station (ISS) is just one space-shuttle flight away from completion, but the construction boom in low-Earth orbit looks set to continue for at least another decade. Last week, China offered the most revealing glimpse yet of its plans to deploy its own station by 2020. The project seems to be overcoming delays and internal resistance and is emerging as a key part of the nation's fledgling human space-flight program. At a press briefing in Beijing, officials with the China Manned Space Engineering Office even announced a contest to name the station, a public-relations gesture more characteristic of space programs in the United States, Europe and Japan. China first said it would build a space station in 1992. But the need for a manned outpost "has been continually contested by Chinese space professionals who, like their counterparts in the United States, question the scientific utility and expense of human space flight", says Gregory Kulacki, China project manager at the Union of Concerned Scientists, headquartered in Cambridge, Massachusetts. "That battle is effectively over now, however, and the funds for the space station seem to have been allocated, which is why more concrete details are finally beginning to emerge." Significantly smaller in mass than the ISS and Russia's Mir space station (see 'Rooms with a view'), which was deorbited in 2001, the station will consist of an 18.1-metre-long core module and two 14.4-metre experimental modules, plus a manned spaceship and a cargo craft. The three-person station will host scientific experiments, but Kulacki says it also shares the broader goals of China's human space program, including boosting national pride and China's international standing. The space-station project will unfold in a series of planned launches over the next ten years. Last Friday, official state media confirmed that the Tiangong 1 and Shenzhou 8 unmanned space modules will attempt a docking in orbit later this year, a maneuver that will be crucial for assembling a station in orbit. If that goes well, two manned Shenzhou craft will dock with Tiangong 1 in 2012. China will then move on to proving its space laboratory capabilities, launching Tiangong 2 and Tiangong 3, which are designed for 20-day and 40-day missions, respectively, over the next 3 years. Finally, it will launch the modules that make up the station. Observers describe the program as slow, systematic and cautious. According to the Chinese media, engineers have made more than 170 technical modifications to China's Long March rocket in preparation for the next series of launches. "As China is now really venturing into terra incognita with this stage of its manned space program, the unknowns and risks are greater," says Eric Hagt, director of the China program at the Center for Defense Information in Washington DC. Hagt says that the station's small size is partly the result of advances in miniaturization since Mir and the ISS were designed and partly because China "needs to be economical and has stressed that all along. China has studiously avoided the impression that it is in a race, particularly with the United States." China has said that its space technology will be compatible with that used in the ISS so that modules from other countries could dock with its station, and it promises that its facility will be able to host experiments from non-Chinese researchers. But the US Congress, fearing industrial espionage, has long opposed any role for China in the ISS. As a result, the Chinese space program has had no alternative but to "go it alone", says Joan Johnson-Freese, an expert on national security and on China at the US Naval War College in Newport, Rhode Island. Last week's announcement came just two weeks after the passage of a 2011 US federal spending bill that explicitly prohibits NASA from collaborating with China.

Inherency – No Coop Now – Wolf Clause (1/4)

The US and China have taken small steps toward cooperation, but the Wolf Clause impedes meaningful cooperation

Xinhua, 5/17/11

(Xinhua general news Service Editorial, Commentary: "Wolf Clause" betrays China-U.S. cooperation, Section: WORLD NEWS; Political, Lexis) AC

U.S. space shuttle Endeavor blasted off from the Kennedy Space Center in Florida on Monday, kicking off its 25th and the last space mission in history, which draws great attention from media worldwide. The event, of course, is also catching the eyes of media and scientists in China because the shuttle carries the Alpha Magnetic Spectrometer-2 (AMS) particle detector, the mankind's most ambitious effort to date to explore the universe' origin with Nobel laureate physicist Samuel Ting as the program's principal scientist. The 7,000-kg AMS worth 2 billion U.S. dollars will be placed in the International Space Station (ISS) and an international team of more than 600 scientists, including many from China's mainland and Taiwan, have joined Ting's exhausting but respectable AMS program. China's scientists have played a crucial role in designing and manufacturing some core parts of the device. However, Chinese journalists who hoped to cover the launching of Endeavor were simply denied entry to the site by a ban initiated by Frank Wolf, chairman of the Committee of Commerce, Justice, Science, and Related Agencies in the House of Representatives. The United States' National Aeronautics and Space Administration (NASA) revoked the media passes granted to journalists from China due to the ban, or the "Wolf Clause", which was regarded as "discriminative" by even Americans themselves. On April 15, U.S. President Barack Obama signed into law the budget bill for fiscal year 2011 which will end on Sept. 30 after the House of Representatives passed it. The bill included a clause which bans any China-U.S. joint scientific research activities related to NASA or coordinated by the White House's Science Policy Office. Under the clause in the budget bill, none of the Congress-approved funds for the U.S. government "may be used for the National Aeronautics and Space Administration or the Office of Science and Technology Policy 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." It also applies the limitation "to any funds used to effectuate the hosting of official Chinese visitors at facilities belonging to or utilized" by NASA. As a result, Chinese journalists were denied the opportunity to make live coverage of the shuttle's blast-off, just as their peers from other countries have done. The Chinese journalists were also kept away from NASA's press conferences. Obviously, the "Wolf Clause" runs counter to the trend that both China and the United States are trying to push ahead their exchanges and cooperation in science and technology. During the third round of the China-U.S. Strategic and Economic Dialogue (S&ED) held in Washington earlier this month, the two sides published accomplishments of the dialogue, which includes the cooperation in science and technology. Moreover, China and the U.S. this year renewed their bilateral agreements on scientific and technological cooperation. The Obama administration also attached importance to the current development and trend of scientific and technological cooperation between China and the U.S. and realized the nature of mutual benefit brought about by such cooperation. John P.Holdren, director of the Science and Technology Policy Office of the White House, has told Xinhua that the cooperation on science and technology was one of the most dynamic fields in bilateral relations between China and the United States. The "Wolf Clause" exposed the anxiety of hawkish politicians in the United States over China's peaceful development in recent years, and it also demonstrated their shortsightedness to the whole world. The "Wolf Clause" was a result of compromise made by Obama to Republicans to avoid possible bankruptcy of the U.S. government. It is also a concession between U.S. Republicans and Democrats, but the "clause" will not in any way change the trend of the increasingly closer scientific and technological cooperation between China and the U.S. In fact, the "Wolf Clause" has incurred criticism, even from some

**[CARD CONTINUES]**

Inherency – No Coop Now – Wolf Clause (2/4)

**[CARD CONTINUED, NO TEXT REMOVED]**

U.S. scientists. Richard Milner, director of Laboratory for Nuclear Science at the Massachusetts Institute of Technology (MIT), thought China's contribution to the project was "crucial". The professor believed that the "Wolf Clause" was a "discriminative decision" and it would eventually hurt the U.S. itself. As the unpopular clause came into effect, China's journalists became the first victims of the discriminative legislation by being turned away from the Kennedy Space Center. Although the clause will terminate as the fiscal year 2011 ends in September, Wolf seemed unreconciled and claimed he will work to extend the ban to next year. Today, while the Chinese and U.S. governments are deepening their cooperation, Wolf acted against the trend with a cold war mentality. This is something that should raise the vigilance of peace-loving people in the world.

The Wolf Clause prevents NASA from cooperating with China in any way

Robertson, Epoch Times Staff Writer, 5/15/11

(Matthew studied at the Australian National University in Canberra, Australia, and the National Chengchi University in Taipei, Taiwan. “Wolf’s Clause Imperils (Some of) Administration’s China Plans”, http://www.theepochtimes.com/n2/united-states/bill-keeps-nasa-technology-out-of-china-57689.html., The Epoch Times is able to provide well-sourced stories through the original reporting done by the Chinese-language edition of The Epoch Times, pg 1, accessed: 6/27/11 [added by (R) Frank Wolf –VA]) TJL

Two Chinese journalists were supposed to watch the U.S. space shuttle Endeavour take off from the Kennedy Space Center in Florida in mid-May. The shuttle was using the Alpha Magnetic Spectrometer-2 particle detector, a component developed by Chinese scientist Samuel Ting, and their story would have made useful provender for China’s state media apparatus. But they were turned away at the gates. Their employer, Xinhua, the official mouthpiece of the Chinese Communist Party (CCP), went into high dudgeon. A scornful editorial made no bones about the man and the law responsible: “‘Wolf Clause’ betrays China-U.S. cooperation,” the headline read. It was the doing of Rep. Frank Wolf, a long-term critic of the CCP, after he became chairman of the House Commerce, Justice, and Science Appropriations Subcommittee in January. The language he inserted into the spending bill for those agencies in April prevents NASA and the White House's Office of Science and Technology Policy (OSTP) from using federal funds. The agencies are not allowed 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.” Additionally, it prevents NASA from hosting "official Chinese visitors."

Inherency – No Coop Now – Wolf Clause (3/4)

**NASA funding provisions limit cooperation with China**

**Smith, President of Space and Technology Policy Group, 11**

(Marcia, Space Policy Online, “House CR Cuts NASA, Prevents Cooperation with China, Allows Constellation to be Terminated”, February 13, <http://www.spacepolicyonline.com/pages/index.php?option=com_content&view=article&id=1413:house-cr-cuts-nasa-prevents-cooperation-with-china-allows-constellation-to-be-terminated&catid=67:news&Itemid=27>) PG

**The House Appropriations Committee's version of the next Continuing Resolution (CR) does more than cut NASA's budget.  It prohibits spending money on anything that would lead to space cooperation with China**, and releases NASA from the prohibition against cancelling the Constellation program that was in an earlier appropriations bill. The cuts to NASA are shown in a new [SpacePolicyOnline.com Fact Sheet](http://www.spacepolicyonline.com/pages/images/stories/NASA_FY2011_Budget_in_112th_Congress.pdf) that will track NASA's FY2011 appropriations as they continue to be considered in the 112th Congress.    **An earlier version of the House Appropriations Committee's recommendations, released last Wednesday, called for cutting NASA $379 million from its FY2011 request as part of an overall $74 billion cut to federal spending for FY201**1.   Conservative "Tea Party" Republicans [rejected](http://www.spacepolicyonline.com/pages/index.php?option=com_content&view=article&id=1407:house-appropriators-will-cut-100-billion-from-presidents-fy2011-request&catid=67:news&Itemid=27) the committee's recommendations because they had pledged a $100 billion cut during their campaigns.  The committee members regrouped and on Friday issued their revised recommendations that total $100 billion. The reduction is to the FY2011 President's request for government spending, but the bill introduced by the appropriations committee, [H.R. 1](http://www.rules.house.gov/Media/file/PDF_112_1/legislativetext/2011crapprops/AppropCRFinal_xml.pdf), uses FY2010 spending as its baseline.  When reading the bill, one must compare its budget recommendations with what is in the 2010 Consolidated Appropriations Act (P.L. 111-117), not the President's FY2011 request.    NASA would be cut $303 million compared to its 2010 spending level, but $578.7 million from the FY2011 request.   Details are in our fact sheet. **The committee's bill also prohibits spending any funds appropriated for NASA or the White House Office of Science and Technology Policy for space cooperation with China unless specifically authorized by Congress.** The exact language is -- SEC. 1339. (a) None of the funds made available by this division may be used for the National Aeronautics and Space Administration or the Office of Science and Technology Policy to develop, design, plan, promulgate, implement, or execute a policy, program, order, or contract of any kind to participate, collaborate, or coordinate in anyway with China or any Chinese-owned company unless such activities are specifically authorized by a law enacted after the date of enactment of this division. (b) The limitation in subsection (a) shall also apply to any funds used to effectuate the hosting of official Chinese visitors at facilities belonging to or utilized by the National Aeronautics and Space Administration.

Wolf Clause thwarts cooperation now, preventing fulfmilment of joint statement

DiMascio, congressional editor, 4-25-11

(Jen, “The Stopper” Aviation Week & Space Technology, Lexis, Accessed June 27, 2011, EJONES)

If the Obama administration wants to realize its goal of deepening space cooperation with China, it will have to circumvent Rep. Frank Wolf (R-Va.), the chairman of the House Appropriations subcommittee that controls NASA's purse strings. The 16-term Republican objects to such teaming not just on moral grounds, but for economic and security reasons as well. He says China «has the most aggressive spying program against us of any government in the history of the world,» more extensive than the KGB in the Soviet Union's heyday. He has in his office a video of Chinese prisoners being executed, allegedly so their organs can be harvested by the People's Liberation Army—the same overseers, he says, that are responsible for the Chinese civil space program. And he complains that his computer was breached by Chinese hackers, as were those of 16 other members of Congress. Wolf has already succeeded in including means to stop a wide array of bilateral space cooperation with China or Chinese companies in the bill to fund the government for fiscal year 2011. The proposal would even bar the government from using money to host

**[CARD CONTINUES]**

Inherency – No Coop Now – Wolf Clause (4/4)

**[CARD CONTINUED, NO TEXT REMOVED]**

«official Chinese visitors» at NASA facilities. And that is just the beginning. «We're going to continue,» he says. «We're going to do everything we can» to block any cooperation with China. NASA officials did not return calls seeking comment, but presumably White House officials and Senate Democrats signed off on it during budget negotiations. Wolf's proposal, included in the appropriations bill approved by Congress earlier this month, makes it exceedingly difficult for the space agency to carry out a joint statement the White House issued with China in January to deepen dialogue and «continue discussions on opportunities for practical future cooperation in the space arena, based on principles of transparency, reciprocity and mutual benefit.» The administration wants greater access to China's largely opaque space program, in part because knowledge of the civil space program could be leveraged to provide a better understanding of its military space activities, according to a senior administration official. Also, because China and Russia are the only other nations that send humans to space, there are those who say cooperating with both countries could yield scientific, economic and diplomatic benefits.

Inherency – AT – Status Quo Solves – Wolf Clause Expires

Wolf will push for extension

Financial Peoples 11

(online news source about US international influence in the business world, financialpeoples.com, 5/8/11, <http://we.financialpeoples.com/congress-bans-scientific-collaboration-with-china-cites-high-espionage-risks.html>, accessed 7/1/11, CW)

Poster advertising lecture by co-founder of Javaphile, a hacking group based in China that has linked with multiple targeted attacks on U.S. websites, in 2007. A two-sentence clause included in the U.S. spending bill approved by Congress a few weeks ago threatens to reverse more than three decades of constructive U.S. engagement with the People’s Republic of China. The clause prohibits the White House Office of Science and Technology Policy (OSTP) and the National Aeronautics and Space Administration (NASA) from coordinating any joint scientific activity with China. Representative Frank Wolf (R-VA), a long-time critic of the Chinese government who chairs a House spending committee that oversees several science agencies, inserted the language into the spending legislation to prevent NASA or OSTP from using federal 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.” By prohibiting the OSTP from working with China, Wolf claims the ban will bear on “the entire bilateral relationship on science and technology.” “It’s the whole ball of wax,” said Wolf in an interview with Science Insider. Although the ban will expire at the end of the current fiscal year in October, Wolf will seek to make the prohibition on any scientific collaboration between U.S. research agencies and China permanent. “We don’t want to give them the opportunity to take advantage of our technology, and we have nothing to gain from dealing with them,” said Wolf. “China is spying against us, and every U.S. government agency has been hit by cyber-attacks. They are stealing technology from every major U.S. company. They have taken technology from NASA, and they have hit the NSF computers . . . . You name the company, and the Chinese are trying to get its secrets.” Meanwhile, the Obama Administration has taken the position that the ban does not apply to any U.S. scientific interactions with China conducted as part of foreign policy. This interpretation will likely allow the President to continue current activities until the spending bill expires in October. Wolf’s intense concern about the possible theft of intellectual property and sensitive military technologies resulting from joint U.S.-China research activities explain why the spending bill also prohibits NASA facilities from hosting “official Chinese visitors.” While this draconian prohibition may strike some as borderline paranoid, a growing body of evidence suggests that the risks of espionage are considerably higher than most people would suspect. Wolf has learned this lesson the hard way. In 2006, Wolf’s office was targeted in a cyber-attack, which the Federal Bureau of Investigation traced to sources operating in the People’s Republic of China. Speaking from the floor of the U.S. House of Representatives in June 2008, Wolf said: In August 2006, four of the computers in my personal office were compromised by an outside source. This source first hacked into the computer of my foreign policy and human rights staff person, then the computers of my chief of staff, my legislative director, and my judiciary staff person. On these computers was information about all of the casework I have done on behalf of political dissidents and human rights activists around the world.

\*\*\* Space Race Advantage

Space Race Now (1/2)

US and China are in the early stages of a new space race

Ritter, Time Magazine, 8

(Peter is a reporter at Time Magazine: “The New Space Race: China vs. US” 2-13-2008 [http://www.time.com/time/world/article/0,8599,1712812,00.html](http://www.time.com/time/world/article/0%2C8599%2C1712812%2C00.html), MLF, accessed 7-1-11)

Both the U.S. and China have announced intentions of returning humans to the moon by 2020 at the earliest. And the two countries are already in the early stages of a new space race that appears to have some of the heat and skullduggery of the one between Washington and Moscow during the Cold War, when space was a proxy battleground for geopolitical dominance. On Monday, the U.S. Department of Justice announced the indictment of a former Boeing engineer for passing sensitive information about the U.S. space program to the Chinese government. According to the indictment, Dongfan Chung, a 72-year-old California man who worked for Boeing until September 2006, gave China documents relating to military aircraft and rocket technology, as well as technical information about the U.S. Space Shuttle. U.S. officials say the Chung case is part of a pattern of escalating espionage by China. "We're seeing this on all fronts," says Dean Boyd, a spokesman for the Justice Department's National Security Division. Since October 2006, the Justice Department has prosecuted more than a dozen high-profile cases involving China, including industrial espionage and the illegal export of military technology. In an unrelated case also announced Monday, a Defense Department employee was arrested in Virginia for passing classified information about the sale of U.S. military technology to Taiwan to alleged Chinese agents. The scale of Chung's alleged espionage is startling. According to the Justice Department, Chung may have been providing trade secrets to Chinese aerospace companies and government agents since 1979, when he was an engineer at Rockwell International, a company acquired by Boeing in 1996. He worked for Boeing until his retirement in March 2003, and continued to work as a contractor for the company until September 2006. The indictment alleges that Chung gave China documents relating to the B-1 bomber and the Delta IV rocket, which is used to lift heavy payloads into space, as well as information on an advanced antenna array intended for the Space Shuttle. According to the indictment, Chinese officials gave Chung a shopping list of information to acquire for them. In one instance, Chung said that he would send documents through an official in China's San Francisco consulate. In another, a Chinese contact suggested he route information through a man named Chi Mak, a naturalized U.S. citizen who also worked as an engineer in California and who was convicted last year of attempting to provide China with information on an advanced naval propulsion system. The indictment charges that Chung was a willing participant. "Having been a Chinese compatriot for over 30 years and being proud of the achievements by the people's efforts for the motherland, I am regretful for not contributing anything," Chung allegedly wrote in an undated letter to one of his mainland contacts. (Chung's lawyer has maintained his client's innocence.) China's manned space program, codenamed Project 921, is indeed a matter of considerable national pride for a country that sees space exploration as confirmation of superpower status. China is pouring substantial resources into space research, according to Dean Cheng, an Asian affairs specialist at the U.S.-based Center for Naval Analysis. With a budget estimated at up to $2 billion a year, China's space program is roughly comparable to Japan's. Later this year, China plans to launch its third manned space mission — a prelude to a possible lunar foray by 2024. With President George W. Bush vowing to return American astronauts to the moon by 2020, some competition is perhaps inevitable. China's space program lags far behind that of the U.S., of course. "They're basically recreating the Apollo missions 50 years on," says Joan Johnson-Freese, chair of the National Security Studies Department at the U.S. Naval War College and an expert on China's space development. "It's a tortoise-and-hare race. They're happy plodding along slowly and creating this perception of a space race." But there may be more at stake than national honor. Some analysts say that China's attempts to access American space technology are less about boosting its space program than upgrading its military. China is already focusing on space as a potential battlefield. A recent Pentagon estimate of China's military capabilities said that China is investing heavily in anti-satellite weaponry. In January 2007, China demonstrated that it was able to destroy orbiting satellites when it brought

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Space Race Now (2/2)

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down one of its own weather satellites with a missile. China clearly recognizes the significance of this capability. In 2005, a Chinese military officer wrote in the book Joint Space War Campaigns, put out by the National Defense University, that a "shock and awe strike" on satellites "will shake the structure of the opponent's operations system of organization and will create huge psychological impact on the opponent's policymakers." Such a strike could hypothetically allow China to counterbalance technologically superior U.S. forces, which rely heavily on satellites for battlefield data. China is still decades away from challenging the U.S. in space. But U.S. officials worry espionage may be bringing China a little closer to doing so here on Earth.

**China’s new developments make it a threat to US space dominance**

**Wall, Space.com Senior Writer, 11**

(Mike, Space.com, “Washington Worries China Will Challenge U.S. Dominance in Space”, may 12, <http://www.space.com/11646-china-space-policy-united-states.html>) PG

**China recently demonstrated the ability to destroy satellites on orbit, and it's ramping up** [**plans for a space station**](http://www.space.com/11592-china-space-station-tiangong-details.html) **and a possible manned lunar landing in the next decade or so.** At a hearing on "The Implications of China's Military and Civil Space Programs," a range of experts discussed what these developments might mean for the United States. In 2007, **China** [**destroyed one of its own satellites**](http://www.space.com/5049-pentagon-report-china-growing-military-space-power.html) **on orbit during an anti-satellite test, showcasing an ability that makes the United States and other nations nervous.** Since then, the country has conducted other tests advancing its military space capabilities, including a 2010 missile-interception demonstration. **The country also hopes to build a large space station between 2015 and 2022**, according to hearing panelist Alanna Krolikowski, a visiting scholar at George Washington University's Space Policy Institute. And, beyond that, **China appears to be gearing up for a manned lunar landing.** The nation's human spaceflight program aims to complete an in-depth concept study on the subject by about 2020, Krolikowski said at the hearing. These developments have some politicians and policy experts worried. They think **China may be positioning itself to challenge outright the United States' dominance in space**, which currently gives America a huge advantage on the battlefield. “What concerns me most about the Chinese space program is that, unlike the U.S., it is being led by the People’s Liberation Army (PLA)," Congressman Frank Wolf (R-VA) testified at the hearing. "There is no reason to believe that the PLA’s space program will be any more benign than the PLA’s recent military posture."

China’s increase in space activity leads to a space race

New Scientist ‘08

(New Scientist, 02624079, 2/23/2008, Vol. 197, Issue 2644 “China’s Space Reputation Growing Fast EBSCO host 7/1/11 BLG)

Last week, NASA chief Mike Griffin admitted at a congressional hearing that China is a serious competitor for the US. His speech marks a turnaround: "A few years ago, I was not particularly concerned about Chinese primacy in human spaceflight relative to that of the US," he said. China's rapid progress and a visit to the country changed his mind. China still has some catching up to do. So far, it has only launched two crewed missions. But on Tuesday, the state media reported that the country plans to launch at least 10 missions this year - a record number. These include two Shenzhou spacecraft, two environmental satellites and a communications satellite for Venezuela. There are worries that the rivalry between the US and China could spill over into an arms race in space. This week, China said a US plan to fire a missile at a crippled reconnaissance satellite was a threat to space security, despite having shot down one of its own weather satellites in January 2007.

US Losing Space Competitiveness To China

**The US is militarily dependent on space, but is no longer the clear leader.**

**Berrigan, World Policy Institute, Research Associate ‘07**

(Frida, April 2007 World Policy Institute, Research Associate Progressive, 00330736, Apr2007, Vol. 71, Issue 4 “China joins the Battle for Space” EBSCOhost <http://web.ebscohost.com/ehost/detail?vid=38&hid=10&sid=a03a83d6-ae6c-48cd-aed8-847f942a8f89%40sessionmgr10&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=a9h&AN=24637247> 7/2/11v BLG)

**China's successful test against a satellite points up the vulnerability of the U.S. military — and economy. More than 800 satellites orbit the globe; half belong to the United States**. Russia operates eighty-nine, China owns another thirty-five, and the rest are divided among states and commercial ventures. **According to the Union of Concerned Scientists' database of satellites, one-fourth of U.S. satellites are owned by the military**. But the military's reach goes far beyond that, Samson points out that "**80 percent of military communications go over civilian satellites." The U.S. military is space-dependent. "We have the most highly informationalized military in the world,"** says Hitchens**. Satellites are not just used to guide bombs and missiles to their targets or collect intelligence data, but to arrange for supply replenishment, relay orders, and to network the military across great expanses.** David Wright, co-director of the Union of Concerned Scientists' Global Security Program, notes **that up until China's January 11th test, the United States exercised clear dominance in space**. Washington and Moscow tested a small number of anti-satellite weapons in the 1970s and '80s, but both sides have largely abided by a moratorium since the United States destroyed a satellite in 1985. U.S. supremacy, says Wright, meant that "we did not have to think much about what other countries were doing and wanted to do in space."

**China is inching towards US space leadership**

**Economist ‘09**

(00130613, 10/24/2009, Vol. 392, Issue 8654 “Aiming High” <http://web.ebscohost.com/ehost/detail?vid=46&hid=10&sid=a03a83d6-ae6c-48cd-aed8-847f942a8f89%40sessionmgr10&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=a9h&AN=44812133> EBSCOhost 7/2/11 BLG)

**A Chinese moon landing might chip away at America's sense of its scientific superiority, adding to the worries that were aroused in 2005 when a panel commissioned by Congress gave warning that America was losing its technological edge. The panel cited statistics showing that China produces 600,000 engineering graduates a year against America's 70,000** (though a detailed report published by the panel two years later gave a far narrower gap and questioned whether degrees from the two countries were comparable). **Even before China gets to the moon, it aims to have a rudimentary space station of its own.** The first orbiting module (Tiangong, or Heavenly Palace), which will be used to gain docking experience for the space-station project, will be launched as early as next year. Work on the station itself could begin in 2015, Chinese media say. When the first Long March 5 is delivered to Wenchang in 2014, America may not even have a space-launch vehicle of its own. Unless Mr Obama decides otherwise, the Space Shuttle will retire next year. Its successor, the Ares rocket, is not due to be put into service until 2015. **Some scholars in America see this gap in their country's launch capability as an opportunity to reach out to China.** The current plan is to rely mainly on Russian and commercial American launch services to get Americans to the International Space Station (ISS). The relationship with Russia can be tricky, as the invasion of Georgia last year demonstrated. Teaming up with China would help spread the risk.

China Rising Now – Space

China is becoming a leader in space and technology to smaller states globally

Moltz, associate professor at the Naval Postgraduate School, 5/11/11

(Dr. James Clay, “Military And Civil Space Programs In China; Committee: Senate U.S.-China Economic And Security Review Commission”, Capitol Hill Hearing Testimony, LexisNexis, accessed 7/1/11) EK

China has also used space to pursue its foreign policy goals. In 1992, it founded the Asia Pacific Multilateral Cooperation in Space Technology and Applications (APMCSTA). This group, which included Pakistan, Thailand, and a number of other developing countries, eventually began cooperating in several areas, including in the joint development of satellites based on Chinese technology. In 2008, China led a subset of this group to establish the Asia Pacific Space Cooperation Organization (APSCO) a formal, membership only group modeled on ESA. The APSCO organization now includes seven dues paying members: China, Bangladesh, Iran, Mongolia, Pakistan, Peru, and Thailand. China has high hopes for APSCO, but it has yet to attract more accomplished space powers to the group. APSCO engages in joint research and data exchange efforts, as well as formal training courses for scientists and engineers from the Asian Pacific region in space technology and remote sensing. Through these efforts, China has been able to portray itself as a "purveyor" of space knowhow and technology to lesser developed states in Asia and elsewhere. One target of interest has been Indonesia, which recently received satellite ground stations and communications equipment from China, as well as visit by Chinese taikonauts. In recent years, China has also begun to engage in considerable commercial space exports. It has sold satellite laser ranging equipment to Argentina and ground stations and satellites to Venezuela, Pakistan, and Nigeria, among others. While China's space enterprises are seeking profits abroad, China also uses space exports for political purposes. Its space deals with Nigeria and Venezuela, for example, were motivated by Chinese interests in longterm energy security. In both cases, these deals for Chinese built and launched geostationary communications satellites were officially commercial, but on very favorable credit terms to the purchasing countries, with China providing some costs and offering lowor zero interest rates on its loans. China also provided technical training to each country's space scientists, as well as building ground stations on their territories.

China is emerging as the new space power

Wolf, Reuters Defense Technology Correspondent, 11

(Jim, 1-30-11, “US-China space cooperation fades” <http://www.royalsociety.org.nz/2011/01/03/china-usa-space-2/> MLF, accessed 7-2-11)

The Chinese visit to NASA did not materialize in 2010 for reasons that have not been explained. NASA representatives did not reply to questions but a Chinese embassy spokesman, Wang Baodong, said he suspected it was “mainly a scheduling issue.” China is an emerging space power. Over 13 years starting in August 1996, it ran up 75 consecutive successful Long March rocket launches after overcoming technical glitches with the help of US companies. China launched its second moon orbiter in October. In 2008, it became the third country after the United States and Russia to send astronauts on a spacewalk outside an orbiting craft. Beijing plans an unmanned moon landing and deployment of a moon rover in 2012 and the retrieval of lunar soil and stone samples around 2017. Chinese scientists have talked about the possibility of sending a man to the moon after 2020 – more than 50 years after US astronauts accomplished the feat.

China Rising Now – Tech

China’s attempts to become a major power have lead them to make technologies that challenge US dominance in Space

Tellis, Senior Associate at the Carnegie Endowment, 8

(Dr. Ashley, “CHINA’S PROLIFERATION PRACTICES, AND THE DEVELOPMENT OF ITS CYBER AND SPACE WARFARE CAPABILITIES,” Hearing before the US-China Economic and Security Review Commission, May 20, 2008, Pg. 15-16, JSkoog)

The first is that it is a truly comprehensive program. China is not just another developing country that has capabilities that are discrete and isolated. The Chinese space program essentially is an end-to-end program. It has everything from space science to international cooperation integrated into a whole and designed to serve the purposes of national policy. The purposes of national policy in this context are essentially the accumulation of Chinese national power and the hope that this accumulation of national power will once again restore China to being a major global power in the international system. So the first element is its comprehensiveness. The second element is that the program is essentially integrated. It's hard to find within the Chinese space program any clear distinctions between the civilian and the military. In fact, many have characterized the Chinese space program as essentially being a military program which has certain civilian projects undertaken as part of that larger rubric. The important policy point of consequence of this reality is that any cooperation with China in space must be understood to benefit at some level its military capabilities. So the second element is that the program is integrated. The third element is that it is really a very focused program. The Chinese have refused to invest in space capabilities that involve a frittering of resources. Rather they have tailored the program to meet very specific developmental and military needs. So don't look to the Chinese space program and hope to see an isomorphic replication of what the U.S. space program looks like. It's a much smaller program, but because China's resources are constrained, it's a program that is tailored very clearly to meeting certain national goals. To the degree that competition with the U.S. is involved in this program, it's a program that's focused on essentially acquiring technologies from any source at the lowest cost possible and integrating these technologies so acquired to advance Chinese national interests. Let me say a few words about China's military space capabilities which are the dimension of the space program that assists Chinese military forces. China's military space capabilities are essentially defined by its national military strategy, which is focused on preparing for active defense in the context of local wars which are fought under informationalized conditions. The essence of this framework is essentially to seek, secure, and maintain information superiority in the context of a conflict. Because this is the strategic aim of the Chinese military space program, the military space program has three basic dimensions: China seeks to develop a wide spectrum of capabilities designed to advance its conventional military operations. The second is that China seeks to develop capabilities that will deny its adversaries access to space. And third, because there is a clear understanding that space is central to information dominance, China recognizes that a struggle for space is inevitable and therefore must prepare for it. Given this fact, most Chinese military space investments today seem to be focused in three broad mission areas: Developing capabilities for space support. That is essentially being able to launch systems of different kinds into space. Providing capabilities that enhance force application, that is, the use of military forces, primarily China's conventional military forces. And third, developing capabilities that allow China to deny the use of space to other more superior adversaries, especially the United States.

Chinese Space Power High – General (1/2)

**China space rise now**

**Seedhouse,** aerospace scientist & PhD from German Space Agency's Institute of Space Medicine, 10

[Erik, aerospace scientist & PhD from German Space Agency's Institute of Space Medicine, “The New Space Race: China vs. the US” Springer and Praxis Publishing Co., <http://www.scribd.com/doc/31809026/The-New-Space-Race-China-Vs>, page 225, accessed6/31/11, HK]

First. China's space program enables Beijing to expand its national power — a strategic objective critical to recovering the greatness that China benefitted from for much of the last millennium. In this regard. China's participation in the new space race is as much a battle with its own demons as it is a quest for prestige. To recover its former greatness, China must not only sustain high levels of economic growth and preserve national stability, but must also defuse external threats to ils national security. As described in Chapters 1 and 4, China's space program helps to advance these goals simultaneously. In short, space technologies have now become critical to the successful conduct of China's military operations, while simultaneously procuring symbolic benefits via its manned space program. Second. China's space program is comprehensive, integrated, and focused. As evidenced by its extensive military and civil hardware. China is now a major spacefaring nation capable of pursuing the entire spectrum of space activities.Unlike the US.which funds a civilian *and* a military space program, no significant divide exists between China's civilian and military programs. Additionally, the focus of China's space program, while undoubtedly marked by deliberation and purpose, is nevertheless characterized by a "buy, copy, or steal" approach, aimed at competing with the US technologically. Third, Chinese doctrine is undeniably offensive. Due to the prospective future of arms in space. Beijing is forced to develop the entire spectrum of capabilities required to exploit space. It must also prepare to deny space to potential adversaries such as the US. whoarc capable of utilizing their military advantage lo neutralize Chinese space assets. Furthermore, given the pivotal significance of information domination in producing victory in war, China must prepare for future space conflicts by fully-integrating its space assets into its military operations. Fourth, in common with the US.China has made considerable investments in developing counterspace capabilities. These capabilities range from space object surveillance and identification systems to directed energy weapons, and from co-orbital satellites to kinetic attack technologies. Furthermore, these counterspace programs have persisted even after China's ASAT test - an event that conclusively demonstrated China's true intentions in low Earth orbil (LEO). "Assuring the security of space capabilities becomes more challenging as technology proliferates and access to it by potentially hostile entities becomes easier

Chinese Space Power High – General (2/2)

China is unilaterally taking large strides in space development—establishes their power

Branigan and Sample, Beijing and Science Correspondents, 11

(Tania and Ian, April 26, Guardian UK “China unveils rival to International Space Station”, <http://www.guardian.co.uk/world/2011/apr/26/china-space-station-tiangong>, accessed 6/30/11) PG

[**China**](http://www.guardian.co.uk/world/china) **laid out plans for its future in** [**space**](http://www.guardian.co.uk/science/space) **yesterday, unveiling details of an ambitious new space station to be built in orbit within a decade.** The project, which one [Nasa](http://www.guardian.co.uk/science/nasa) adviser describes as a "potent political symbol", is **the latest phase in China's rapidly developing space programme.** It is less than a decade since China put a human into orbit for the first time, and three years since its first spacewalk. **The space station will weigh around 60 tonnes and consist of a core module with two laboratory units for experiments**, according to the state news agency, Xinhua. Professor Jiang Guohua, from the China Astronaut Research and Training Centre, said the facility would be designed to last for around a decade and support three astronauts working on microgravity science, space radiation biology and astronomy. **The project heralds a shift in the balance of power among spacefaring nations.** In June, the US space agency, Nasa, will mothball its whole fleet of space shuttles, in a move that will leave only the Russians capable of ferrying astronauts to and from the [International Space Station](http://www.guardian.co.uk/science/international-space-station). The $100bn (£60.5bn) outpost is itself due to fly only until 2020, but may be granted a reprieve until 2028. Bernardo Patti, head of the space station programme at the [European Space Agency](http://www.guardian.co.uk/science/european-space-agency) (Esa), said: "**China is a big country. It is a powerful country, and they are getting richer and richer. They want to establish themselves as key players in the international arena.** "They have decided politically that they want to be autonomous, and that is their call. They must have had some political evaluation that suggests this option is better than the others, and I would think autonomy is the key word." **China is also developing a cargo spaceship, which will weigh less than 13 tonnes and have a diameter of no more than 3.35 metres**, to transport supplies and equipment to the space station. **China hopes to make its first moon landing within two years and to put an astronaut on the moon as early as 2025.**

Chinese Space Power High – China Would Win

China will beat the U.S. in the space race

Moskowitz, Senior Writer for Space.com, 6/12/10

(Clara, “China's Lofty Goals: Space Station, Moon and Mars Exploration”, InsideNova.com, http://www.space.com/166-china-lofty-goals-space-station-moon-mars-exploration.html, accessed 6/30/11) EK

China is shifting its space program into high gear, with recently announced goals to build a manned space station by 2020 and send a spacecraft to Mars by 2013 — all on the heels of its second robotic moon mission this year. Yet some space analysts worry that China's ascendancy in space means the waning of American superiority in spaceflight. The United States is retiring its storied space shuttle fleet in 2011 and plans to rely on commercial spaceships for orbital flights, once they're available, while planning future deep-space missions. "Certainly [the Chinese] see it as an opportunity to garner prestige at a time when the U.S. space program is in what some people call turmoil, and what others call regrouping," said Joan Johnson-Freese, chairwoman of the department of national security studies at the Naval War College in Newport, R.I., and an expert on China's space program. Among Americans, she said, "there is the perception that China is somehow getting ahead, that the U.S. is sliding behind." All in all, China's space accomplishments are gaining worldwide notice. "To the rest of the world, China's working very eagerly and aggressively," Johnson-Freese said. "Canada, Europe and Russia are all banging on the door for China to work with them. I certainly have a concern that the U.S. is going to end up the odd man out in terms of the globalization of space." While some American lawmakers have expressed wishes to cooperate with China in space, the idea also faces strong resistance. A trip last month by NASA chief Charlie Bolden to China sparked controversy. "It should go without saying that NASA has no business cooperating with the Chinese regime on human spaceflight," U.S. Rep. Frank Wolf (R-Va.) wrote to Bolden in an Oct. 5 letter before the visit. "China is taking an increasingly aggressive posture globally, and their interests rarely intersect with ours." In a response letter, Bolden said the trip was intended to be "introductory in nature" and would not include discussions about specific opportunities to cooperate in human spaceflight. For its part, China has expressed willingness to cooperate with other nations, though all its space achievements so far have been largely solo.

China Weaponizing Now – General (1/3)

China weaponizing now

MacDonald, United States Institute of Peace, 5/11/11

[Bruce W., United States Institute of Peace, USIP.org, “Testimony before the U.S.-China Economic and Security Review Commission onThe Implications of China’s Military and Civil SpacePrograms” 5/11/11 <http://www.usip.org/files/resources/bmacdonald_testimony.pdf> , accessed 7/1/11, HK]

A fundamental problem we face is that China says little at an official level about its military space policy and doctrine. Chinese counterspace capabilities may be intended purely for deterrence purposes, to be used in warfare at a time of their choosing, or some combination of the two. PLA leaders have informally told U.S. officials and others that it is in the interest of an inferior power to keep secret information about its weaknesses and strengths, and they appear to be following this advice quite strictly. Time and again the U.S. has been rebuffed in seeking greater openness and transparency in Chinese space and larger defense strategy. That said, the PLA publishes an increasing number of papers on these issues that have not received enough attention, the problem, I am told, being a resource constraint. There is a sizable PLA literature on space conflict, but it is unclear how well this reflects Chinese government thinking, any more than U.S. military journals reflect official U.S. policy. However, China’s ASAT and missile defense tests and this literature demonstrate a PLA awareness of the importance of offensive counterspace (OCS) capabilities and strongly suggest that such capabilities are part of China’s larger plans for the future – and perhaps missile defense capabilities as well. It is also unclear whether this reflects PLA interest in OCS for warfighting or just for deterrence, though I suspect it is likely a mixture of both. Should China choose to deploy its demonstrated ASAT system, or more advanced versions of it, U.S. space assets and the military and economic infrastructures they support would be put at risk. One thing is certain – more clarity on PLA and Chinese government thinking on space deterrence, doctrine, space stability, and related issues – and Russian thinking, too -- are urgently needed and are important to U.S. security. If there is any aspect of space security that needs more resources, space intelligence and analysis is it.

China is modernizing and weaponizing in the status quo-their military is becoming more competitive

Aviation Week ‘11

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That is not to say the U.S. can blithely ignore or marginalize the rate at which China is building military capability. As the Navy's top intelligence official concedes, "We have been pretty consistent in underestimating the delivery and initial operational capability of Chinese weapons systems." Of course, China's weapons modernization goes far beyond just stealth aircraft. There is the DF-21D, an anti-aircraft ballistic missile, a broad range of unmanned systems, command and control devices to target ballistic missiles, small bombs that can be carried internally on a stealth fighter, and ships suitable for a blue water navy--all within the context of virtually unlimited money for such endevors. In short, China appears to have identified all of the disconnects between its strategic ambitions and military resources, and is proceeding rapidly to fill those gaps. Even more of a concern to intelligence officials than China's kinetic weapons is its non-kinetic threat such as electronic attack and cyberwarfare. Regardless of whether the J-20 is a prototype or technology demonstrator, it is one more sign of growing expertise, an indication that it is starting to realize its ambition to counter adversaries across a range of domains. Will China flex its growing military muscle when Beijing feels its strategic interests are being challenged--strategic interests that may be in direct conflict with those of the U.S.? We cannot rule out that possibility, if not probability, whether it is Taiwan, North Korea, their "near seas" or competition for strategic resources anywhere in the world.

China Weaponizing Now – General (2/3)

China is expanding its military capabilities by developing new technology, including in space, which threatens the US

Chase, Associate Research at the United States Naval War focusing Taiwan’s security policy, Chinese military modernization, and Chinese nuclear and conventional missile force developments, 2011

(Michael, “Chinese Military Modernization: Challenges and Opportunities for the United States,” The Moderate Voice, January 26, http://www.china-defense-mashup.com/chinese-military-modernization-challenges-and-opportunities-for-the-united-states.html, accessed July 6, 2011, NS)

Once dismissed as a "junkyard army," the Chinese military is now impressing outside observers”and alarming China's neighbors”with its growing air, naval, missile, space, and information warfare capabilities. In recent years, China has deployed increasingly potent capabilities, including modern surface ships, advanced submarines, fourth-generation fighter aircraft, and conventional cruise and ballistic missiles, including an anti-ship ballistic missile designed to target U.S. aircraft carriers. China is also enhancing its command, control, communications, intelligence, surveillance, and reconnaissance systems and its space and cyber warfare capabilities. The internet leak of photos and videos unveiling China's new J-20 stealth fighter and the test flight of the aircraft during Secretary of Defense Robert Gates' recent visit to China seemed intended to underscore the growing capability of China's military. China's eagerness to showcase the faster than expected development of the J-20”and its determination to send a message to the United States”also ensured that concerns about the implications of a more powerful Chinese military would loom large when President Hu Jintao arrived in Washington for a state visit this week. China's growing military capabilities, along with incidents such as Beijing's anti-satellite test in January 2007 and its harassment of a U.S. surveillance ship in March 2009, are raising questions about whether an increasingly powerful China represents a threat to the U.S. and its allies. Fueling China's accelerating military modernization”and the concerns of analysts who see China as an emerging competitor”is the rapid growth of their defense budget. Beijing's increases in defense spending have enabled the People's Liberation Army to develop more credible options for using force against Taiwan and countering U.S. military intervention. Beyond Taiwan, PLA modernization is increasingly tied to China's growing role on the world stage. As China's economic and security interests become more global, the PLA's roles and missions are evolving to contend with an increasingly diverse set of challenges. To fulfill these expanded missions, China's leadership has tasked their military with enhancing its capabilities to participate in military operations other than war, such as the counter-piracy patrols that China's navy has been conducting in the Gulf of Aden. Such activities are seen as important to protecting China's growing global interests, but senior officers stress that their military's core mission remains deterring and winning wars. China continues to lag behind the United States military in many respects, but its new capabilities already present serious challenges to the security balance in the Asia-Pacific region. Beijing's advances in cyber-warfare, anti-satellite weapons, submarines, and ballistic missiles could threaten America's regional bases, the aircraft carriers that have become symbols of U.S. presence and power projection, and the space assets and computer networks that support them.

China Weaponizing Now – General (3/3)

China is modernizing now in space to challenge the US

Hays, retired Airforce Lieutenant Colonel, 9

(Peter L., senior policy analyst supporting the plans and programs division of the National Security Space Office “Space and Sino-American Security Relations” <http://web.mac.com/rharrison5/Eisenhower_Center_for_Space_and_Defense_Studies/Journal_Vol_2_No_3_files/Space%20and%20Defense%202_3.pdf> SPACE and DEFENSE Volume Two Number Three Winter 2009 accessed: 6/28/11 pg 30) TJL

China is moving more secretly but probably even more quickly and comprehensively in developing “a multi-dimensional program to limit or prevent the use of space-based assets by its potential adversaries during times of crisis or conflict.”35 The PLA has deployed a variety of kinetic and non-kinetic weapons and terrestrial jammers and is also exploring other counterspace capabilities including inspace jammers, high-energy lasers, highpowered microwave weapons, particle beam weapons, and electromagnetic pulse weapons. In addition, China is “researching and deploying capabilities intended to disrupt satellite operations or functionality without inflicting physical damage.”36 The successful Chinese ASAT test of January 2007 was perhaps most notorious for its dangerous irresponsibility in creating a persistent debris cloud that now accounts for more than 25 percent of all catalogued objects in Low-Earth Orbit (LEO),37 but the debris the test created should not obfuscate the system’s very significant strategic implications given the high-value U.S. assets it can hold at risk in LEO, difficulties in finding and tracking the road-mobile transporter-erector-launcher (TEL) for the Dong Feng (DF)-21 (or SC-19) intermediate-range missile that launches the ASAT, and the extremely limited protection measures the United States currently has against this capability. Moreover, the direct ascent ASAT is just one of the many types of counterspace capabilities the Chinese are developing or have already fielded; it may not even be their most threatening or pervasive capability. It is more important to consider the synergistic and tailored benefits China is likely to obtain by employing many counterspace capabilities that operate in different ways against different orbital regimes and mission areas including hundreds if not thousands of high-power mobile terrestrial jammers, high-energy lasers with precision tracking capabilities at multiple sites, and potentially sophisticated in-space jamming and negation capabilities.

Space Race – US Posture Key (1/4)

Total US space dominance outlined by the National Space Policy pressures China and others into a space race

Shixiu, senior fellow of military theory studies and international relations at the Institute for Military Thought Studies, 2007

(Bao, “Deterrence Revisited: Space” China Security, Issue No. 5, p. 2-3, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=185&Itemid=8>, Accessed June 30, 2011, NS)

The latest U.S. National Space Policy (NSP) poses a serious threat to the national security of China. This new policy, released in October of 2006, sets out the George W. Bush administration’s vision for defending America’s security in space.1 It reinforces a unilateral U.S. approach to space security which is compounded by the U.S. opposition to any international treaties that limit its access to or use of space.2 Aggregately, Bush’s space policy pursues hegemony in space and poses a significant security risk to China that cannot be left unaddressed. The NSP presents a number of challenges to China’s security environment. First, it grants the United States with exclusive rights to space: the right to use any and all necessary means to ensure American security while at the same time denying adversaries access to space for “hostile purposes.” This sets up an inequitable environment of “haves” and “have-nots” in space, raising suspicion amongst nations. For instance, the NSP declares that U.S. space systems should be guaranteed safe passage over all countries without exception (such as “interference” by other countries, even when done for the purpose of safeguarding their sovereignty and their space integrity). With its significant space assets and military space capabilities, this situation gives the United States an obvious and unfair strategic advantage in space. Second, it refutes international restrictions and undercuts potential international agreements that seek to constrain America’s use of space. This effectively undermines any potential initiatives put forth by the international community to control space weaponization– initiatives that China supports. This U.S. position leads the global community to suspect U.S. unilateralist intentions in space. Lastly, while the policy may not state it explicitly, a critical examination of its contents suggest its intention to “dissuade and deter” other countries, including China, from possessing space capabilities that can challenge the United States in any way– a parameter that would effectively disallow China to possess even a minimum means of national defense in space. The resultant security environment in space is one with one set of rules for the United States and another set of rules for other nations. In such a context, only U.S. security concerns are taken into account with a result of the reinforcement of a zero-sum dynamic to which space is already prone and threatens to pressure others into a military space race.

Space Race – US Posture Key (2/4)

China not inherently bad – their aggression is only a response to U.S. aggression

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 30) EK

It is noteworthy that much of the above writings are in response to U.S actions and draw from U.S. literature on space power. Indeed, some of the more offensive oriented writings came in response to U.S. efforts to field ground based missile defense systems, which some Chinese see as a dedicated space weapon. 126 In fact, “within China it is widely believed that U.S. missile defense and space planning targets China.” 127 This fear was fueled by the Schriever space war games conducted by the U.S. Air Force that were clearly aimed at simulating a conflict in space with China. 128 Larry M. Wortzel notes that “The PLA’s development of space warfare doctrine is not some self-made phenomenon. Rather, the PLA has carefully absorbed and is reacting to what the U.S. military has published on space warfare and counter-space operations.” 129

U.S. diplomatic space policies are not popular internationally – seen as threatening

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 51-52) EK

The U.S. diplomatic approach to space has not been popular abroad in the past decade. Many observers point to U.S. reluctance to discuss the weaponization of space in the CD and how the U.S. is consistently one of the only countries to vote against treaties like PAROS as proof the U.S. wants to weaponize space. U.S. doctrine also perennially speaks of the need to dominate space and prevent the freedom of access to others if needed, the antitheses of what many states in the CD promote. Compounded by export controls that prevent U.S. space alliances from developing too far, the U.S. has many blemishes on its diplomatic approach to space, which China could easily exploit. However, the NSP and NSSS reflect a renewed focus on diplomacy to achieve U.S. goals in space. The NSP lists a number of areas for U.S. Departments and agencies to seek greater international cooperation including human spaceflight, nuclear power for space exploration, debris monitoring, and long-term preservation of the space environment. 162

[NOTE: CD = United Nations Conference on Disarmament]

Space Race – US Posture Key (3/4)

US space posture leads to Chinese weaponization

Zhang, Research Associate in the Project on Managing the Atom in the Belfer Center for Science, 8

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Chinese officials have expressed a growing concern that U.S. missile defense and “space control” plans, particularly the development of space weapons, will stimulate a costly and destabilizing arms race. In April of 2002, Vice ForeignMinister Qiao Zonghuai summarized the official Chinese view of U.S. plans: Considerable progress has been made in outer space-related weapons research and military technology. It will not take long before drawings of space weapons and weapon systems [are] turned into lethal combat instruments in outer space.Meanwhile, military doctrines and [concepts] such as “control of space” and “ensuring space superiority” have been unveiled successively, and space operation [command] headquarters and combatant troops are in the making. If we should remain indifferent to the above-mentioned developments, an arms race would very likely emerge in outer space in the foreseeable future. Outer space would eventually become the fourth battlefield besides land, sea and air. If such a scenario should become reality it would be virtually impossible for mankind to continue their anticipated exploration, development and utilization of outer space, and all economic, cultural and social activities in connection with the utilization of outer space would be severely interrupted.1

Space Race – US Posture Key (4/4)

China worries about unilateral domination of space

Zhang, Research Associate at the Project on Managing the Atom, 6

(Hui Zhang - Research Associate at the Project on Managing the Atom in the Belfer Center for Science and International Affairs at Harvard University's John F. Kennedy School of Government, Project on Managing the Atom, "Space Weaponization and Space Security: A Chinese Perspective", China Security, Vol 2, Issue 1) AC

Many Chinese officials and security experts have great interest in U.S. military planning documents issued in recent years that explicitly envision the control of space throught the use of weapons in, or from, space to establish global superiority. In its 2003 report, “Transformation Flight Plan,” the U.S. Air Force lists a number of space weapon systems desirable in the event of a spacewar.1 These include space-based kinetic kill vehicles, space-based lasers (SBL),~25~hypervelocity rod bundles, space-based radio frequency energy weapons, space maneuver vehicles, and the Evolutionary Air and Space Global Laser Engagement (EAGLES) laser relay mirror. In 2004, the Air Force showed clearly in its Counterspace Operations Doctrine document what it actually intends to do: that is, achieve and maintain space superiority, – the “freedom to attack as well as the freedom from attack” – in space.2In practice, the pursuit of controlling space would require anti-satellite(ASAT) weapons to negate an adversary’s space capabilities. It is believed that the current Ground-based Midcourse Defense (GMD) system deployed in Alaska will have a significant intrinsic capability for ASAT use. Thus, it is reasonable to argue that one true purpose for the Bush administration’s rush for the GMD deployment could be to acquire an ASAT capability for its space control strategy. The scope of space weaponry, generally accepted by many Chinese includes not only weapons stationed in outer space, but also weapons based on the ground, at sea or in the air that target objects in outer space. Outer space objects, in the Chinese definition, include not only satellites but also ICBMs traveling through outer space.3 Since the GMD system would intercept its target in outer space, it could be seen as a space weapon. Moreover, the GMD system could be the first step toward a more robust, layered system for space control. Consequently, China feels that U.S. plans to deploy a missile defense system is an intentional first step toward the weaponization of space.4 In addition, the United States also pursues a number of other research programs that could lead to ASAT weapons. For instance, the Air Force has a research project to test small satellites, the Experimental Satellite Series (XSS), that could be used to attack other satellites.5Further, the United States is pursuing space-based ballistic missile defense(BMD) for global engagement capabilities. It is believed that an effective, global-coverage BMD system must start intercepting an ICBM as early as the boost phase, which, under U.S. Missile Defense Agency plans, would entail the use of space-based interceptors. Indeed, the current U.S. budget for missile defense shows continued interest in a number of space weapon-related programs, such as the Near Field Infrared Experiment (NFIRE) satellite and Space-Based Interceptor Test Bed. The United States does have legitimate concerns about its space assets, given that U.S. military operations, economy and society are increasingly dependent on space assets and such assets are inherently vulnerable to attacks from many different sources. However, it does not mean that the United States currently faces credible threats from states that might exploit those vulnerabilities.6Further, space-based weapons cannot protect satellites, since these weapons are also vulnerable to many types of attack, similar to the satellites requiring protection. The true aim of U.S. space plans is not to protect U.S. assets but rather to further enhance American military dominance. Prof. Du Xiangwan, vice president of the Chinese Academy of Engineering, recently presented his view that the Transformation Flight Plan indicated that “many types of space-based weapons will be developed,” and “the tendency toward space weaponization is obvious and serious.” He further noted that military dominance on Earth is not enough, “the U.S. also seeks to dominate space.”7 Beijing fears that by unilaterally developing missile defense systems and pursuing space weaponization, the United States is seeking to establish a global military superiority using both offensive and defensive means.8 Moreover, China’s fears about U.S. hegemonic tendencies are exacerbated by the fact that space weapons, due to their vulnerability to other less expensive, asymmetric measures, are inherently first-strike weapons.

Space Race – US Exclusion Policy Drives Chinese Policy (1/2)

Excluding China from international space objectives and US space militarization causes China to develop ASATs

Shixiu, senior fellow of military theory studies and international relations at the Institute for Military Thought Studies, 2007

(Bao, “Deterrence Revisited: Space” China Security, Issue No. 5, p. 2-3, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=185&Itemid=8>, NS)

developments and military inevitabilities. China’s space program Under American strategic Accessed June 30, 2011, dominance, a deterrent in space will decrease the possibility of the United States attacking Chinese space assets. Bao Shixiu China Security Winter 2007 is not transparent in many respects, but neither is that of the United States. The reality is that many space technologies are inherently dual-use and it is therefore very difficult to distinguish sufficiently and effectively the intentions and capabilities in space. Without some kind of mutual understanding on controlling arms in space, suspicion will dominate relations between China and the United States. U.S. actions seem to support the notion that China’s space program is a threat even if China only develops commercial space assets. On the one hand, the United States has rejected Russian and Chinese proposals to negotiate a treaty banning space weapons and their testing.5 According to official U.S. statements, such a treaty is not necessary as there is no military race in space. In reality, the United States rejects such proposals because it would constrain its freedom of action in space. In effect, this provides the United States with the opportunity to weaponize space at a time of its choosing or at a time of its perceived need. Coupled with the fact that a series of American space reports in recent years have argued vehemently for the development of military capabilities to control and dominate space, from a Chinese perspective it appears that the United States aims to deploy space weapons regardless of China’s developments and intentions in space.6 In this context, the only conclusion that can be drawn is that the United States unilaterally seeks to monopolize the military use of space in order to gain strategic advantage over others and afford it the ability to protect U.S. interests. While China is committed to upholding international treaties and norms, it also has its own national interests and cannot subsume them to the interests of another country. China may consider the security problems of the United States, but cannot change its national security considerations at their whim. Hence, China must be prepared to avoid being at the mercy of others in space. China must seek countermeasures to deal with this problem accordingly.

China uses ASATs to draw attention to its exclusion from US space policy

Hitchens, Director of World Security Institute’s Center for Defense, 2007

(Theresa, “U.S.-Sino Relations in Space: From ‘War of Words’ to Cold War in Space?” China Security, p. 13-14, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=186>, Accessed June 30, 2011, NS)

The most worrisome of all is whether China’s other rival nations will seek to react in kind. Still other U.S. analysts note that China has been increasingly frustrated with the U.S. refusal to discuss Beijing’s concerns about U.S. military space plans – a stance that was hammered home in the Bush administration National Space Policy released Oct. 6, 2006, which flatly rejected any new efforts at space arms control or agreements that would “limit” U.S. options in space.9 Certainly, it is true that the U.S. position long has been – and continues to be – that there is “no arms race in space” and thus no need for any discussions regarding the matter.10 Simultaneously, the U.S. position has been to “keep its options open” regarding space weapons, with the new Bush space policy taking a harder line than ever on the subject. Thus, it is conceivable that Chinese leaders may have come to the conclusion that only a display of Beijing’s power to launch such an arms race would bring Washington to the table to hear their concerns.

Space Race – US Exclusion Policy Drives Chinese Policy (2/2)

China will develop its space weapons, including ASATS, only in response to US space militarization

Shixiu, senior fellow of military theory studies and international relations at the Institute for Military Thought Studies, 2007

(Bao, “Deterrence Revisited: Space” China Security, Issue No. 5, p. 2-3, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=185&Itemid=8>, Accessed June 30, 2011, NS)

An effective active defense against a formidable power in space may require China to have an asymmetric capability against the powerful United States. Some have wondered whether a defensive policy applied to space suggests that China’s possession of a robust reconnaissance, tracking, and monitoring space system would be sufficient for China to prevent an attack in space and would be in line with China’s “doctrinal” position of “defensive” capabilities. An effective active defense strategy would include the development of these systems but would also include anti-satellite capabilities and space attack weapon systems if necessary. In essence, China will follow the same principles for space militarization and space weapons as it did with nuclear weapons. That is, it will develop anti-satellite and space weapons capable of effectively taking out an enemy’s space system, in order to constitute a reliable and credible defense strategy. An active defense strategy will also include an intensification of civilian defense preparations against possible space attack if and when that possibility becomes apparent.13 China will need to use the vast expanse of its territory and its high-tech achievements to keep its second-strike capabilities in secrecy. In short, while China resolutely opposes the weaponization of space, it will develop its own space weapons if the United States does so first. The guiding principle for the development of new weapon systems is the following: if an adversary has developed a new weapon and is prepared to use it in the future battlefield, China will attempt to develop the same kind of weapon. This holds true regardless of whether the battlefield is on land, sea, air or space.

Missiles are an attempt at displaying strength to gain negotiating power with the US to develop Chinese space technology

Hagt, director of the China Program at the World Security Institute, 2007

(Eric, “China’s ASAT Test: Strategic Response,” China Security, Issue No.5, p. 35, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=187&Itemid=8>, Accessed June 30, 2011, NS)

The ASAT test itself also implies that the military option is beginning to win out over a diplomatic one in China as a solution to head off U.S. space control ambitions. Every call by China’s diplomatic effort at the CD for prevention of space weaponization has been effectively blocked by the United States.31 It has rejected any treaty that will restrict its freedom to act in space, claiming it has the most to lose and therefore has unique security considerations.32 The United States has also offered the reasoning that a treaty to ban weapons in space was not needed because there was no military space race.33 China sees this U.S. stance as a thinly veiled attempt to retain absolute access to space while leaving the door open for the United States to develop space weapons in the future if necessary.34 Along with the Bush administration’s willingness to use force against those who threaten U.S. national security interests in space, concluding an arms control treaty in space seems remote.35 Verification measures for a test ban for ASAT and other space weapons have also been rejected as infeasible due to the inherent dual-use nature of space technology. 36 The Chinese side has believed, fairly accurately, that the United States simply will never sign such a treaty for lack of trust, fearing others will secretly pursue space weapons capabilities while America’s hands are tied.37 China has also taken a deeper lesson from U.S. action: the United States negotiates based primarily on strength. Without strength of its own, China cannot bring the United States to the negotiating table.38

Space Race – Containment

China perceives space weaponization as containment

Zhang, Research Associate in the Project on Managing the Atom in the Belfer Center for Science, 8

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

Space Race – Space Conflict Inevitable Now

Numerous countries involved in space ensure conflict and escalation inevitable now

MacDonald, Council on Foreign Relations, ‘8

(“China, space weapons, and U.S. security” By Bruce W. MacDonald, Council on Foreign Relations, 2008, <http://books.google.com/books?hl=en&lr=lang_en&id=o0GkabrNftIC&oi=fnd&pg=PP2&dq=china+space&ots=OTkniE7uA-&sig=wC4ye20QpZY-ECCnrpPTf-Tr9yY#v=onepage&q&f=false>, p. 3, 6.30.10, SWolff)

While China represents the most prominent challenge to U.S. space assets, it is not the only one. Russia and others are taking another look at space to counter U.S. military capability, and friendly countries such as India are reexamining space's role in this new era, in at least partial response to China's 2007 test. India's army chief of staff has stated that "the Chinese space program is expanding at an exponentially rapid pace in both offensive and defensive content," and another Indian general has observed that "with time we will get sucked into a military race to protect our space assets and inevitably there will be a military contest in space."8 Such actions could possibly trigger responses from other regional adversaries as well. The strategic landscape of this new space era is largely unexplored and poorly understood. Nonetheless, certain objectives arc clearly in the interest of the United States. The risks inherent in space conflict, where vital U.S. interests are at stake, suggest that preventing space conflict should be a major U.S. security objective, and that all instruments of U.S. power, not just military measures, should be drawn upon to this end. The United States needs to deter others from attacking its space capabilities and bolster an international space regime that reinforces deterrence, the absence of conflict in space, and the preservation of space as an environment open to all. Such a regime would allow the United States to continue reaping the critical information and service benefits that U.S. military space assets provide.

Space Race – Causes Miscalc (1/2)

Space arms race triggers dangerous reactionary cycle

MacDonald, Council on Foreign Relations, ‘8

(“China, space weapons, and U.S. security” By Bruce W. MacDonald, Council on Foreign Relations, 2008, <http://books.google.com/books?hl=en&lr=lang_en&id=o0GkabrNftIC&oi=fnd&pg=PP2&dq=china+space&ots=OTkniE7uA-&sig=wC4ye20QpZY-ECCnrpPTf-Tr9yY#v=onepage&q&f=false>, p. 3, 6.30.10, SWolff)

In a number of fora and military writings, China has unofficially indicated that the United States should not underestimate China in space or its ability to respond to U.S. military space initiatives that China perceives as a threat. Chinese specialists have stated that, in addition to protecting their satellites against U.S. offensive capabilities, China will develop a deterrent space force if there is no change in U.S. space policy, which they see as shunning any restrictions and reflecting U.S. attraction to space dominance. They have suggested that China would be prepared to deploy sufficient offensive counterspace capability to build confidence in its ability to deter U.S. use of weapons against Chinese space assets. This would not require China to match U.S. space-force deployments, but to have enough to deter. In general, as the CFR-sponsored Independent Task Force report on U.S.-China relations noted in 2007, "China does not need to surpass, or even catch up with, the United States in order to complicate U.S. defense planning or influence U.S. decision-making in the event of a crisis in the Taiwan Strait or elsewhere." This could reflect Chinese thinking on space weapons, as well. China has openly announced its intention to build "informationalized armed forces and being capable of winning informationized wars by the mid-twenty-first century;"\* offensive counterspace capabilities would be an important component in this capability. Coordinating and executing any such attack would be difficult and fraught with danger for China. Some are concerned that an action-reaction cycle involving space weapons could result in an "arms race in space," even without actual conflict, making both the United States and China worse off than if neither went down this path.

Space Race – Causes Miscalc (2/2)

Even if China does not want to go to war with US, there’s still a chance of miscalc

MacDonald, United States Institute of Peace, 5/11/11

[Bruce W., United States Institute of Peace, USIP.org, “Testimony before the U.S.-China Economic and Security Review Commission onThe Implications of China’s Military and Civil SpacePrograms” 5/11/11 <http://www.usip.org/files/resources/bmacdonald_testimony.pdf> , accessed 7/1/11, HK]

In the face of this growing Chinese military space challenge, it is easy to assume the worst about Chinese intentions. China seeks to be able to prevail militarily at some point in the future should conflict come, but they see the United States as militarily superior to them and thus would be unlikely to consciously provoke any military conflict. While we should guard against a worst case, we should not treat it as a given. I do not believe China or the PLA is spoiling for a fight with the United States – China has come too far to want to place their substantial economic achievements at risk unless they faced an extraordinary threat to their national security. In addition, China faces serious demographic realities over the next couple of decades, where their ratio of workers to retirees will shrink substantially (the result of their onechild policy), which further underscores China’s need for stability and continued economic growth for years to come. China also has additional needs, and vulnerabilities: Growing environmental problems and water shortages with no obvious solutions that are growing irritants to the public; A relentless search for new sources of manufacturing inputs; An increasingly restive working class that is making new demands for higher wages and political freedoms; A non-democratic one-party system that leaves its senior leadership constantly looking over its shoulder at possible challenges to its authority, especially in the aftermath of the “Arab Spring”; Growing citizen anger against corruption and cronyism that seems impossible for the CCP to root out; and many more. These factors are reasons why China is probably not looking for war with the United States, though they also could inadvertently become factors in China’s stumbling into a conflict they would ordinarily not want, through miscalculation or distraction. One characteristic of too many wars in the last century is that they are the result of miscalculation that ignites the tinder of fundamental geopolitical tensions. Averting major power conflict requires skillful management of tensions by senior leaders of the major powers. China has become much more internationally sophisticated, though with important exceptions, in its dealings with the rest of the world than has been true in the past, and this is reflected in its civilian leadership. Unfortunately, the PLA’s senior officer corps trails its civilian counterparts in this respect. They have much less interaction with foreign official and travel abroad much less frequently than their U.S. counterparts. This means that the PLA overall views world events from a less knowledgeable and sophisticated perspective, a danger in this increasingly complex world, and could explain, for example, the political “tone-deafness” of the PLA in the manner they conducted their 2007 ASAT test. This PLA problem becomes more serious when one realizes that the PLA is organizationally separate from the rest of the Chinese government, and reports only to the Central Military Commission, currently chaired by President Hu Jintao. President Hu, and his likely successors, has no significant military background, and the majority of the CMC’s members are top PLA officers, suggesting that civilian oversight of major military decisions and consideration of their larger implications are not as carefully reviewed as in the U.S. government. Normally this would not be too great a concern, but in a crisis this could be dangerous. Add to this the fact that China has no equivalent of our National Security Council, a critically important body for coordinating our security decision-making, and one comes away concerned about the relative insularity of the PLA in the Chinese power structure. In a crisis, the PLA probably cannot be counted on to show as sophisticated a sense of judgment as one would hope any country’s military leaders, even an enemy’s, to show. All these problems and many more pose potential threats to internal political stability and Communist Party control, providing ample opportunity for crisis and conflict in the years ahead.

Space Race – Quick Attack

China will attack suddenly-empirics prove

Friedberg, professor of politics and international affairs at Princeton, 6/21/11

(Aaron L., professor of politics and international affairs at the Woodrow Wilson School at Princeton University, “Hegemony with Chinese Characteristics”, The National Interest, July-August Issue, p.3, <http://nationalinterest.org/article/hegemony-chinese-characteristics-5439?page=1>, accessed 7/8/11) EK

Their capacity for secrecy also makes it easier for nondemocracies to use force without warning. Since 1949, China’s rulers have shown a particular penchant for deception and surprise attacks. (Think of Beijing’s entry into the Korean War in December 1950, or its attack on India in October 1962.) This tendency may have deep roots in Chinese strategic culture extending back to Sun Tzu, but it is also entirely consistent with the character of its current domestic regime. Indeed, for most American analysts, the authoritarian nature of China’s government is a far greater concern than its culture. If China were a democracy, the deep social and cultural foundations of its strategic and political behavior might be little changed, but American military planners would be much less worried that it might someday attempt a lightning strike on U.S. forces and bases in the western Pacific.

Space Race – Cyber Attacks

China’s counterspace technologies guarantee EMP and cyber attacks

Tellis, Senior Associate at the Carnegie Endowment, 8

(Dr. Ashley, Senior associate at the Carnegie Endowment for International Peace, “CHINA’S PROLIFERATION PRACTICES, AND THE DEVELOPMENT OF ITS CYBER AND SPACE WARFARE CAPABILITIES,” Hearing before the US-China Economic and Security Review Commission, May 20, 2008, Pg. 16-17, <http://www.uscc.gov/hearings/2008hearings/transcripts/08_05_20_trans/08_05_20_trans.pdf>, JSkoog)

What is the net impact of these military space capabilities? I would urge you to think of it in terms of two dimensions: the space capabilities that are focused on force enhancement primarily allow China today to mount a wide variety of conventional operations with a great deal of confidence, either within its borders or at some distance from its borders. Over the next decade, the kinds of capabilities that are most certain to come online will allow China to apply force across a much wider spatial domain, to include by the end of the next decade, the Chinese ability to apply power throughout the Western Pacific, at least in certain specific warfighting dimensions. Where counterspace capabilities are concerned, the basic consequence of counterspace capabilities is that at least in the near term, it allows the Chinese to hold at risk a wide variety of orbital assets, especially those that are in low earth orbit, and as its counterspace capabilities gather steam, it will be able to target orbital systems at much greater altitudes, but even more importantly, to use space as one element in an integrated warfighting strategy that will focus on both command of the electromagnetic and the cyber spectrum. And it is the synergistic use of space electromagnetic attack and cyber attack that poses, I think, the greatest threat to our warfighters.

Space War – Escalates (1/2)

Space conflict between China and the U.S. will escalate

MacDonald, White House Office of Science and Technology Policy, former assistant director for national security, 8

(Bruce W., former assistant director for national security at the White House Office of Science and Technology Policy, “China, Space Weapons, and U.S. Security”, Council Special Report, No. 38, September 2008, p.4, <http://books.google.com/books?id=o0GkabrNftIC&printsec=frontcover&dq=us+china+space&hl=en&ei=XSsOTv6QIs_TiALWtdSuBw&sa=X&oi=book_result&ct=result&resnum=1&ved=0CCoQ6AEwAA#v=onepage&q&f=false>, accessed 7/1/11) EK

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

Space war now would escalate to huge proportions

MacDonald, White House Office of Science and Technology Policy, former assistant director for national security, 8

(Bruce W., former assistant director for national security at the White House Office of Science and Technology Policy, “China, Space Weapons, and U.S. Security”, Council Special Report, No. 38, September 2008, p.3, <http://books.google.com/books?id=o0GkabrNftIC&printsec=frontcover&dq=us+china+space&hl=en&ei=XSsOTv6QIs_TiALWtdSuBw&sa=X&oi=book_result&ct=result&resnum=1&ved=0CCoQ6AEwAA#v=onepage&q&f=false>, accessed 7/1/11) EK

Having crossed a space Rubicon with their ASAT demonstrations, neither nation can un-invent these capabilities. As the United States approaches major security policy reviews with the advent of a new administration in early 2009, both it and China face fundamental choices about the deployment and use of such capabilities, and the development of more advanced space weapons. The United States and China stand at a crossroads on weapons and space: whether to control this potential competition, and if so, how. While the United States is likely well ahead of China in offensive space capability, China currently is much less dependent on space assets that the U.S. military, and thus in the near term has less to lost from space conflict it is became inevitable. China’s far smaller space dependence, which hinders its military potential, ironically appears to give it a potential relative near-term offensive advantage: China has the ability to attack more U.S. space assets than vice versa, as asymmetry that complicates the issue of space deterrence, discussed later. This asymmetric Chinese advantage will likely diminish as China grows increasingly dependent on space over the next twenty years, and as the United States addresses this space vulnerability. Thus, the time will come when the United States will be able to inflict militarily more meaningful damage on Chinese space-based assets, establishing a more symmetric deterrence potential in space. Before then, other asymmetric means are available to the United States to deter China, though at possibly greater escalatory risk. That is, the United States could threaten to attack not just Chinese space assets, but also ground-based assets, including ASAT command-and-control centers and other military capabilities. But such actions, which would involve attacking Chinese soil and likely causing substantial direct casualties, would politically weigh much heavier that the U.S. loss of space hardware, and thus might climb the escalatory ladder to a more damaging war both sides would probably want to avoid.

Space War – Escalates (2/2)

Conflict China means that the US will first strike – that goes nuclear

Tellis, Senior Associate at the Carnegie Endowment, 8

(Ashley, Senior Associate at the Carnegie Endowment, “China’s Space Capabilities and U.S. Security Interests,” October 2008, Carnegie Endowment For International Peace, <http://www.carnegieendowment.org/2008/10/01/china-s-space-capabilities-and-u.s.-security-interests/68r>, JSkoog)

Third, the growth of China’s space and counterspace capabilities contributes to raising the costs of American victory in any future conflict with Beijing. Should the United States find itself in an unlimited war with China, the outcome cannot be in doubt: Washington will win such a conflict and perhaps even win “decisively”, if there are no restraints imposed on its use of force. The presence of nuclear weapons, however, ensures that such unlimited conflicts are thankfully unlikely. Assuring victory in a limited war with China, however, becomes more problematic not because the United States suddenly loses all its military advantages in such a scenario but because a limited conflict, over Taiwan or elsewhere, would involve restrictive rules of engagement and other political-operational constraints which, even if not ultimately subversive of victory, would nonetheless increase its burdens. Because most future conflicts that can be envisaged with China involve limited wars of some kind or another, Beijing’s increasing space and counterspace capabilities – if well used – could become critical, if not decisive, in some quite representative scenarios. Fourth, China’s evolving space and counterspace capabilities promise to expand the dimensions of the battlespace – virtually and physically – in the context of any future Sino-American conflict. Because space-supported conventional operations will become critical for victory for both sides; because the space component of military actions – that is, the space, ground, and link segments in their totality – is conspicuous, highly valuable, vulnerable, and contains relatively few nodes; because defensive and offensive counterspace operations may be hard to distinguish especially in the early phases of a conflict; because both sides will seek to competitively use space to expand their situational awareness while denying the same advantage to the adversary; and, because Chinese operational planning, given its overall conventional weakness, calls for counterspace operations as an integrated element of its military response, it is likely that a future Sino-American conflict, even if intended to be limited in a political sense, will be unable to either bound its offensive operations to the local battlefield alone or resist the temptation to launch crippling attacks first. The demands of victory, even in limited wars, will thus require that the force applied – in both material and virtual senses – range far beyond the physical battlefront to the “rear”: in the adversary’s homeland, possibly in territories of third-parties, and certainly in the realms of space, electronic combat, and computer network operations. Moreover, it may create strong incentives for “first strikes” because of the perceived benefits to conventional operations arising from being able to blind an adversary decisively, even if only for a short time. In such circumstances, ensuring that a future limited war between China and the United States stays restricted will itself become a significant challenge.

Space Race – Hegemony

China’s attempts to become a major power have led them to make technologies that challenge US dominance in Space

Tellis, Senior Associate at the Carnegie Endowment, 8

(Dr. Ashley, Senior associate at the Carnegie Endowment for International Peace, “CHINA’S PROLIFERATION PRACTICES, AND THE DEVELOPMENT OF ITS CYBER AND SPACE WARFARE CAPABILITIES,” Hearing before the US-China Economic and Security Review Commission, May 20, 2008, Pg. 15-16, http://www.uscc.gov/hearings/2008hearings/transcripts/08\_05\_20\_trans/08\_05\_20\_trans.pdf, JSkoog)

The first is that it is a truly comprehensive program. China is not just another developing country that has capabilities that are discrete and isolated. The Chinese space program essentially is an end-to-end program. It has everything from space science to international cooperation integrated into a whole and designed to serve the purposes of national policy. The purposes of national policy in this context are essentially the accumulation of Chinese national power and the hope that this accumulation of national power will once again restore China to being a major global power in the international system. So the first element is its comprehensiveness. The second element is that the program is essentially integrated. It's hard to find within the Chinese space program any clear distinctions between the civilian and the military. In fact, many have characterized the Chinese space program as essentially being a military program which has certain civilian projects undertaken as part of that larger rubric. The important policy point of consequence of this reality is that any cooperation with China in space must be understood to benefit at some level its military capabilities. So the second element is that the program is integrated. The third element is that it is really a very focused program. The Chinese have refused to invest in space capabilities that involve a frittering of resources. Rather they have tailored the program to meet very specific developmental and military needs. So don't look to the Chinese space program and hope to see an isomorphic replication of what the U.S. space program looks like. It's a much smaller program, but because China's resources are constrained, it's a program that is tailored very clearly to meeting certain national goals. To the degree that competition with the U.S. is involved in this program, it's a program that's focused on essentially acquiring technologies from any source at the lowest cost possible and integrating these technologies so acquired to advance Chinese national interests. Let me say a few words about China's military space capabilities which are the dimension of the space program that assists Chinese military forces. China's military space capabilities are essentially defined by its national military strategy, which is focused on preparing for active defense in the context of local wars which are fought under informationalized conditions. The essence of this framework is essentially to seek, secure, and maintain information superiority in the context of a conflict. Because this is the strategic aim of the Chinese military space program, the military space program has three basic dimensions: China seeks to develop a wide spectrum of capabilities designed to advance its conventional military operations. The second is that China seeks to develop capabilities that will deny its adversaries access to space. And third, because there is a clear understanding that space is central to information dominance, China recognizes that a struggle for space is inevitable and therefore must prepare for it. Given this fact, most Chinese military space investments today seem to be focused in three broad mission areas: Developing capabilities for space support. That is essentially being able to launch systems of different kinds into space. Providing capabilities that enhance force application, that is, the use of military forces, primarily China's conventional military forces. And third, developing capabilities that allow China to deny the use of space to other more superior adversaries, especially the United States.

Space Race – Hegemony

China is using technology to become a space leader.

**Morring, Aviation Week senior space editor, & Perrett, Aviation Week Asia- Pacific Bureau Chief, 9**

(Frank, Jr., & Bradley, 11/23/09 Aviation Week & Space Technology, 00052175, 11/23/2009, Vol. 171, Issue 19:”New Topic” EBSCOhost, accessed 7/1/11, BLG)

**Chinese anti-satellite weapon test will intensify funding and global policy debate on the military uses of space China's successful test of an anti-satellite (Asat) weapon means that the country has mastered key space sensor, tracking and other technologies important for advanced military space operations. China can now also use "space control" as a policy weapon to help project its growing power regionally and globally.** Aviation Week & Space Technology first broke the news of the Chinese Asat test on aviationweek.com Jan. 17. China performed the test Jan. 11 by destroying the aging Chinese Feng Yun 1C (FY-1C) weather satellite target at 537 mi. altitude. The attack was carried out with a kinetic kill vehicle launched by a small ballistic missile. U.S. intelligence agencies calculated in advance that the Chinese were ready for the exercise and programmed American eavesdropping and space tracking sensors accordingly to obtain maximum information. The White House confirmed the Aviation Week article Jan. 18 and warned China that its actions will carry ramifications. "We are concerned about it, and we've made it known," says Tony Snow, the White House spokesman**. "The U.S. believes China's development and testing of such weapons is inconsistent with the spirit of cooperation that both countries aspire to in the civil space area," said Gordon Johndroe, U.S. National Security Council spokesman. "We and other countries have expressed our concern to the Chinese regarding this action."**

Space Primacy Good – Key To Hegemony

US primacy & Asian power projection depends on space dominance

Gagnon, Coordinator of the Global Network Against Weapons & Nuclear Power in Space, ‘10

(Bruce K, Coordinator of the Global Network Against Weapons & Nuclear Power in Space, January 1, 2010, Peace Review: A Journal of Social Justice, 22:17–24 1469-9982 online “U.S. Space Technology for Controlling China and Russia” p.21 EBSCO host 7/1/11 BLG)

The entire U.S. military empire is now tied together using space technology. With military satellites in space, the United States can see virtually everything on Earth, can intercept all communications on the planet, and can target virtually any place. Russia and China understand that the U.S. military goal is to achieve ‘‘full spectrum dominance.’’ Using new space technologies to coordinate and direct modern warfare also enables the military–industrial complex to reap massive profits as they construct the architecture for space-directed warfare. The deployment of Aegis destroyers in the Asian-Pacific region, ostensibly to protect against North Korean missile launches, gives the United States greater ability to launch preemptive first-strike attacks on China. In April 2009, Army Gen. Walter Sharp, the commander of U.S. forces Korea, told members of the U.S. Senate Armed Services Committee in Washington that the U.S.–South Korean alliance was ‘‘a linchpin for stability in Northeast Asia.’’ Stability in Northeast Asia translates to U.S. control of China. The United States now has 30 ground-based interceptor missiles deployed in South Korea. Many peace activists there, and in Japan, strongly believe that the ultimate target of these systems is not North Korea, but China and Russia. The current U.S. military transformation underway in South Korea and Japan is indeed a key element in this regional offensive strategy to contain China while justifying the military expansion as containment of North Korea.

US primacy in space key to national security

MacDonald, United States Institute of Peace, 5/11/11

[Bruce W., United States Institute of Peace, USIP.org, “Testimony before the U.S.-China Economic and Security Review Commission onThe Implications of China’s Military and Civil Space Programs” 5/11/11 <http://www.usip.org/files/resources/bmacdonald_testimony.pdf> , accessed 7/1/11, HK]

Space is of major and growing national security importance, which introduces a potentially destabilizing element to U.S. and international security. In addition to responsible behavior, the U.S. ability to fully realize the national security and other benefits of space depends on space remaining a stable and peaceful environment, even in crisis situations if at all possible. Given the heavy and growing U.S. reliance upon space for communications, sensor information, and a host of other benefits, it is no wonder that the space policies of both the previous and current administrations have declared space to be a vital national interest of the United States. Where vital national interests are concerned, stability in space that enables the continuation of substantial U.S. conventional superiority should be a top priority. The primacy of space stability as a key U.S. strategic interest was recognized by the Congressional Commission on the Strategic Posture of the United States when it recommended in 2009 that the United States should “develop and pursue options for U.S. interest in stability in outer space, include[ing] the possibility of negotiated measures.” Measures or actions that would threaten to upset the stability of space could thus be dangerous to our national security, and U.S. policy should seek to avoid such steps. This is why as long as the United States continues to derive more benefits from space than its adversaries, it should be very careful about initiating significant space hostilities with a near-peer space power such as China. Against non-peer space powers, we should be able to rely upon our overwhelming conventional superiority to achieve victory. Against a near-peer space power, we must weigh the cost of losing some significant fraction of our space-derived or-transmitted information against the incremental benefit of offensive counter space (OCS) steps versus other means to achieve comparable objectives.

Space Race – Taiwan Scenario (1/4)

Sino-American space tensions risk Taiwan conflict escalation

MacDonald, Council on Foreign Relations, ‘8

(“China, space weapons, and U.S. security” By Bruce W. MacDonald, Council on Foreign Relations, 2008, <http://books.google.com/books?hl=en&lr=lang_en&id=o0GkabrNftIC&oi=fnd&pg=PP2&dq=china+space&ots=OTkniE7uA-&sig=wC4ye20QpZY-ECCnrpPTf-Tr9yY#v=onepage&q&f=false>, p. 3, 6.30.10, SWolff)

China's far smaller space dependence, which hinders its military potential, ironically appears to give it a potential relative near-term offensive advantage: China has the ability to attack more U.S. space assets than vice versa, an asymmetry that complicates the issue of space deterrence, discussed later. This asymmetric Chinese advantage will likely diminish as China grows increasingly dependent on space over the next twenty years, and as the United States addresses this space vulnerability. Thus, the time will come when the United States will be able to inflict militarily meaningful damage on Chinese space-based assets, establishing a more symmetric deterrence potential in space. Before then, other asymmetric means are available to the United States to deter China, though at possibly greater escalatory risk. That is, the United States could threaten to attack not just (Chinese space assets, but also ground-based assets, including ASAT command-and-control centers and other military capabilities. Itut such actions, which would involve attacking Chinese soil and likely causing substantial direct casualties, would politically weigh much heavier than the U.S. loss of space hardware, and thus might climb the escalatory ladder to a more damaging war both sides would probably want to avoid. War between China and the United States seems unlikely, given their increasing economic interdependence and ongoing efforts in both countries to improve relations. Looming in the background, however, is the possibility of war over Taiwan, a plausible if unlikely scenario that could bring the United States and China into conflict. China might then be tempted to attack U.S. military satellites as a casualty-free way to signal resolve, dissuade Washington from further involvement in a Taiwan conflict, and significantly compromise U.S. military capabilities if such dissuasion failed. Such Chinese actions could well escalate any conflict between the United States and China. As a result, both countries have interests in avoiding the actual use of counter space weapons and shaping a more stable and secure space environment for themselves and other space-faring nations, which could easily be caught in the undertow of a more militarily competitive space domain. Many nations benefit from space assets used for military purposes, including communications, reconnaissance, and positioning.

Space Race – Taiwan Scenario (2/4)

**China’s space technology is key to attacking Taiwan**

**Friedman, Naval Institute Guide to World Naval Weapon Systems author, ‘07**

(Norman, March 2007, U.S. Naval Institute Proceedings, 0041798X, Mar2007, Vol. 133, Issue 3 “War in Space?” EBSCOhost, accessed 7/1/11, BLG)

**The network approach to such tactics is not to retreat to the older ones of mass, because mass is still unaffordable. Instead, it is to gather and correlate more information. Technology may not yet be up to the correlation function, but we can imagine what it would be**. For example, we can imagine setting up pervasive and persistent monitoring. **We would automatically obtain images of insurgents attacking, even if we could not respond in real time. The images in turn could be used to track particular individuals identified as insurgents, and that tracking in turn would make interception possible**. Whether such operation is practical now is another question, but we should be thinking through the implications of the style of warfare we are adopting. **There are real consequences if we change styles (transform) in a half-baked way**. **When they decided that shooting down satellites was a good way to demonstrate their power, and thus to deter us from protecting Taiwan, the Chinese military leadership probably did not realize how far it had gone in the same direction we are following. China is no longer the desperately poor country that had to use human wave attacks in Korea. It is buying expensive technology, and it. like us, cannot have both numbers and the best information technology. If the Chinese do attack Taiwan or anywhere else, they will need good situational awareness, which will mean air and satellite reconnaissance on a real-time basis.** Losing their satellites will not do them enormous good, and it would be naive for them to imagine (hat they can fight a modern information war without such resources. **It may be up to us to make this truth obvious, but it would also be up to us to neutralize the Chinese antisatellite system.**

The Taiwan Strait conflict could be the trigger for a US-Sino space war

**Martel, Naval War College professor of national security affairs & Yoshihara, Institute for Foreign Policy Analysis research fellow, 3**

(William C. and Toshi, Autumn 2003, Washington Quarterly, “Averting Sino-US Space Race”, p. 25, <http://www.twq.com/03autumn/docs/03autumn_martel.pdf>, accessed: 7/1/11, SL)

A congressionally mandated bipartisan commission, which annually reviews security ties between the United States and China, concurs with the Pentagon’s conclusions.20 The U.S.-China Security Review Commission noted that China will need space-based reconnaissance to precisely target its new generation of ballistic missiles, land-attack cruise missiles, and antiship cruise missiles. The latter would be of decisive importance in military operations against U.S. aircraft carriers in the Taiwan Strait.Arguing that China was devising strategies to counter U.S. space-based warfare, the Rumsfeld Commission also identified a conflict in the Taiwan Strait as a threat to U.S. space systems. China could, for example, preemptively attack U.S. assets in space prior to the outbreak of conflict in the Taiwan Strait in an effort to prevent the United States from coordinating military intervention. China could also disrupt commercial satellites upon which everyday American life depends in the hopes of dampening U.S. political will to intervene. 21 Chinese officials and commentators have drawn similar conclusions about the United States. In a rather blunt article published in a Hong Kong–based newspaper, which reportedly enjoys close ties with the Chinese military establishment, Chinese analyst Gao Yan, argued that, because space power determines a nation’s destiny, it is imperative for China to pursue military capabilities in space aggressively. He warned that, because of fundamental differences in ideology, national interests, geopolitics, and military strategies, the PRC must be prepared for the imminent strategic rivalry with the United States.

Space Race – Taiwan Scenario (3/4)

Space advancement determines China’s effectiveness in a Taiwan invasion

Hays, retired Airforce Lieutenant Colonel, 9

(Peter L., senior policy analyst supporting the plans and programs division of the National Security Space Office “Space and Sino-American Security Relations” <http://web.mac.com/rharrison5/Eisenhower_Center_for_Space_and_Defense_Studies/Journal_Vol_2_No_3_files/Space%20and%20Defense%202_3.pdf> SPACE and DEFENSE Volume Two Number Three Winter 2009 accessed: 6/28/11 pg 30) TJL

Space and counterspace capabilities play an increasingly important role for both sides in this scenario. For China, space forces, and space ISR in particular, are needed to find, fix, track, target, engage, and assess strikes on carrier battle groups in near real time. Space links considered necessary for day-night, inclement weather, and near real time operation of this kill chain include highresolution imagery, tracking and data relay, synthetic aperture radar, wake tracking, and electronic intelligence—all capabilities the Chinese appear to have increasingly emphasized. It is not yet clear that China has networked together all the capabilities required for long-range precision strikes against carrier battle groups let alone what the effectiveness of Chinese forces so employed might be, even before they are attrited by the concentric layers of defenses around carrier battle groups.41 Nonetheless, it is apparent that Chinese capabilities for long-range precision strikes against ships have improved significantly; U.S. forces are threatened as they approach what the Chinese call the second island chain that includes Guam, and operate at growing peril the closer they come to Taiwan and the first island chain. The increasingly potent anti-access strike forces the Chinese have deployed or are developing include large numbers of highly accurate cruise missiles, such as domestically produced groundlaunched DH-10 land attack cruise missiles, SS-N-22/Sunburn and SS-N-27B/Sizzler supersonic anti-ship cruise missiles mounted on Sovremennyy-class guided missile destroyers and Kilo-class diesel electric submarines acquired from Russia, as well as an anti-ship ballistic missile based on a variant of the DF-21 that has a range in excess of 1,500 km and highly accurate maneuvering reentry vehicles with conventional warheads and “terminal-sensitive penetrating submunitions” to “destroy the enemy’s carrierborne planes, the control tower and other easily damaged and vital positions.”42 It is also a near certainty that China would mount large-scale counterspace operations, perhaps even as a precursor to other attacks, in any Taiwan scenario. Chinese counterspace operations would likely concentrate on cyber and electronic warfare attacks against U.S. communications and positioning, navigation and timing (PNT) capabilities using terrestrial, airborne, seaborne, and perhaps in-space jammers or ASAT systems. In addition, the Chinese could use their direct ascent ASAT and high-energy lasers to attack U.S. ISR assets in LEO and it is unlikely that either preemptive or reactive maneuvering of these assets would be able to protect them or ensure they could collect on assigned targets.

Space Race – Taiwan Scenario (4/4)

If the US has a conflict with Taiwan China will respond with nuclear weapons

Farah, WorldNetDaily founder and editor, 7

(Joseph, 10-10-7, Los Angeles Times: “A U.S.-China war?” [http://www.latimes.com/la-op-dustup10oct10,0,821657.story](http://www.latimes.com/la-op-dustup10oct10%2C0%2C821657.story) , MLF, accessed 6-30-11]

What China needs to do to improve the plight of its people is to abandon the failed experiment with command-and-control socialism that has created a nightmare world of totalitarianism for more than 1 billion people. President Reagan rejected similar policies toward the Soviet Union and created the conditions that resulted in the Evil Empire imploding of its own dead weight in a peaceful revolution. Reagan rejected the failed policies of the past, in which the United States tried to "help" the Soviet Union with bailouts and other random acts of kindness - virtually everything we're doing with China today. China is the Evil Empire of the future. You don't have to be a prophet to see it. You only need to be a student of history. It was just two years ago that a top Chinese military official said Beijing would use nuclear weapons against the U.S. if Americans defended Taiwan against an invasion from the mainland. "If the Americans draw their missiles and position-guided ammunition on to the target zone on China's territory, I think we will have to respond with nuclear weapons," Zhu Chenghu, a major general in the People's Liberation Army, said at an official briefing. Chas Freeman, a former U.S. assistant secretary of Defense, said in 1999 that a PLA official had told him China would respond with a nuclear strike on the U.S. in the event of a conflict with Taiwan. "In the end, you care more about Los Angeles than you do about Taipei," Freeman quoted this official as saying. More recently, we learned of China's plans for a cyberwar attack on the U.S. to be launched in conjunction with a conventional assault on U.S. carriers in the Pacific. Code-named "Pearl Harbor II" by the Pentagon, the plan was designed to leave America's key allies in the Pacific - Japan and Taiwan - virtually defenseless. Does this sound like the work of friends? We have a clear choice before us in dealing with the next great threat to America's future - follow the policies of Richard Nixon, Gerald Ford and Jimmy Carter, or those of Ronald Reagan. In ignoring China's military expansion, its threats against Taiwan, its threats even against the United States, we serve only to ensure a costly battle against the expansionist power in the future. We are making our worst fear a virtual inevitability. If we want to prevent war with China, the best way is to be resolute, stand on principle, be strong and never back down.

Space Race – CCP Collapse Scenario

Space race ensures overstretch – triggering China collapse

Caldararo et al., graduate student University of Nebraska at Omaha studying

Public Administration, 08

(Kevin E Williams Deputy Director, Studies and Analyses, Assessments and Lessons Learned U.S. Air Force approved Michael, Jason Cantone graduated from the University of Nebraska College of Law with his J.D. and M.A. in Psychology and is currently a doctoral student in Law and Psychology. MEd Jonathan Cowin a senior at Creighton University, specializing in economics. Rachel Huggins junior at Creighton University studying political science and business administration. Hailey Rademacher junior at Creighton University, studying international relations and French Drew Sendelbach currently enrolled in the International Relations program to earn a Master of Arts degree from Creighton University “Global Innovation and Strategy Center Chinese Counterspace Intentions Fall 2008 – Project 08-05 December 2008, pg41 accessed:6-30-11, <http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html&identifier=ADA499438>.) TJL

Concerns about nationalistic expectations could also be alleviated by widely disseminated

“prestige projects.” Some theorists believe the international recognition from advancements in

space technology and the marvel of the 2008 Beijing Olympics will offset “public dissatisfaction with official corruption and social injustice.”154 If this theory is correct, then it leads to its own concerns. It is expensive for any country, even one with lower operating costs such as China, to maintain an active space program. Worldwide economic concerns and the 2008 China stimulus package worth USD$586 billion show that China’s economy is not indestructible.155 In fact, China could lose a space race, “overstretch its resources, and collapse.”156

Collapse will trigger Chinese lash-out – spiraling out of control

Friedberg, Princeton professor of politics and international affairs, 6/21/11

(Aaron L., professor of politics and international affairs at the Woodrow Wilson School at Princeton University, “Hegemony with Chinese Characteristics”, The National Interest, July-August Issue, p.3, <http://nationalinterest.org/article/hegemony-chinese-characteristics-5439?page=1>, accessed 7/8/11) EK

Such fears of aggression are heightened by an awareness that anxiety over a lack of legitimacy at home can cause nondemocratic governments to try to deflect popular frustration and discontent toward external enemies. Some Western observers worry, for example, that if China’s economy falters its rulers will try to blame foreigners and even manufacture crises with Taiwan, Japan or the United States in order to rally their people and redirect the population’s anger. Whatever Beijing’s intent, such confrontations could easily spiral out of control. Democratic leaders are hardly immune to the temptation of foreign adventures. However, because the stakes for them are so much lower (being voted out of office rather than being overthrown and imprisoned, or worse), they are less likely to take extreme risks to retain their hold on power.

Coop Solves – Space Race (1/3)

Chinese weaponization is motivated by unilateral US action, bilateral dialogue and cooperation solves

Logan, Energy Policy Specialist, 7

(Jeffrey –Specialist in Energy Policy in the Resources, Science, and Industry division, CRS Report for Congress, China’s Space Program: Options for U.S.-China Cooperation, 12/14/2007, <http://www.fas.org/sgp/crs/row/RS22777.pdf>) AC

China and the United States have a limited history of both civilian and military collaboration in space. China has publicly pushed for more dialogue and joint activities. Mistrust of Chinese space intentions grew in the mid-1990s when U.S. companies were accused of transferring potentially sensitive military information to China.12 Since then, cooperation has stagnated, often roiled by larger economic, political, and security frictions in the U.S.-China relationship. In September 2006, NASA Administrator Michael Griffin visited his Chinese counterpart, Laiyan Sun, in China. He couched the visit as a “get acquainted” opportunity rather than the start of any serious cooperation in order to keep expectations low. No follow-on activities were announced after the trip, although the Chinese issued a four-point proposal for ongoing dialogue between the two organizations that stressed annual exchanges and confidence building measures.13On January 11, 2007 China conducted its first successful anti-satellite (ASAT)weapons test, destroying one of its inactive weather satellites.14 No advance notice of the test was given, nor has China yet explained convincingly the intentions of the test.15 The international community condemned the test as an irresponsible act because it polluted that orbital slot with thousands of pieces of debris that will threaten the space assets of more than two dozen countries, including China’s, for years. Understanding the nuances of China’s intent in conducting the test is important, but remains open to interpretation. How was the decision made to conduct a test that would contradict Beijing’s publicly-held position on the peaceful use of outer space, and that would almost certainly incur international condemnation? Some speculate that the United States’ unilateral positions encouraged China to conduct the test to demonstrate that it could not be ignored.16 In particular, the U.S. National Space Policy issued in September2006 declares that the United States would “deny, if necessary, adversaries the use of space capabilities hostile to U.S. national interests.”17 Given China’s apparent commitment to space, the growing U.S. dependence on space for security and military use, and Chinese concerns over Taiwan, the ASAT test may have been a demonstration of strategic Chinese deterrence.18 Others saw a more nefarious display of China’s space capabilities, and a sign that China has more ambitious objectives in space.19The Chinese ASAT test seemed to derail any movement to build on the meeting between NASA and CNSA. Some believe that China’s ASAT test will continue to dampen momentum that might have been building for the two countries to expand cooperation, while others argue that it is a pressing reason to boost dialogue.20Challenges of Cooperating with China. Some of the most important challenges of expanding cooperation in space with China include: Inadvertent technology transfer. From this perspective, increased space cooperation with China should be avoided until Chinese intentions are clearer. Joint space activities could lead to more rapid (dual-use)technology transfer to China, and in a worst-case scenario, result in a “space Pearl Harbor,” as postulated by a congressionally appointed commission led by Donald Rumsfeld in 2001.21!Moral compromise. China is widely criticized for its record on human rights and non-democratic governance. Any collaboration that improves the standing of authoritarian Chinese leaders might thus be viewed as unacceptable.! Ineffectiveness. Some argue that increased collaboration will not produce tangible benefits for the United States, especially without a new bilateral political climate.22!Benefits of Cooperating with China. The potential benefits of expanded cooperation and dialogue with China include: Improved transparency. Regular meetings could help the two nations understand each others’ intentions more clearly. Currently, there is mutual uncertainty and mistrust over space goals, resulting in the need for worst-case planning. Regular dialogue would need high-level political support to succeed, but could help address national security concerns.! Offsetting the need for China’s unilateral development. Collaborating with China — instead of isolating it — may keep the country dependent on U.S. technology rather than forcing it to develop technologies alone. This can give the United States leverage in other areas of the relationship.! Cost savings. China now has the economic standing to support joint space cooperation. Cost-sharing of joint projects could help NASA achieve its challenging work load in the near future. Some have argued that U.S. space commerce has suffered from the attempt to isolate China while doing little <CONTINUED>

Coop Solves – Space Race (2/3)

<CONTINUED>

to keep sensitive technology out of China.! Options for Possible Cooperation. Information and data sharing. Confidence building measures (CBMs)such as information exchange on debris management, environmental and meteorological conditions, and navigation, are widely considered an effective first step in building trust in a sensitive relationship. NASA has done some of this with CNSA in the past, but more is possible.! Space policy dialogue. Another area of potential exchange could begin with “strategic communication,”23 an attempt for each side to more accurately understand the other’s views, concerns, and intentions. Dialogue on “rules of the road,” a “code of conduct,” or even select military issues could be included.! Joint activities. This type of cooperation is more complex and would probably require strong political commitments and confidence building measures in advance. Bi- and multi-lateral partnerships on the international space station, lunar missions, environmental observation, or solar system exploration are potential options. A joint U.S.-Soviet space docking exercise in 1975 achieved important technical and political breakthroughs during the Cold War.<CONTINUED>

Continued tension will lead to a space race that destroys the space environment, only multilateral agreements can solve

Zhang, Research Associate at the Project on Managing the Atom, 6

(Hui Zhang - Research Associate at the Project on Managing the Atom in the Belfer Center for Science and International Affairs at Harvard University's John F. Kennedy School of Government, Project on Managing the Atom, "Space Weaponization and Space Security: A Chinese Perspective", China Security, Vol 2, Issue 1) AC

Due to the threatening nature of space weapons, it is reasonable to assume that China and others would attempt to block their deployment and use by political and, if necessary, military means.11 Many Chinese officials and scholars believe that China should take every possible step to maintain the effectiveness of its nuclear deterrent. This includes negating the threats from missile defense and space weaponization plans.12 In responding to any U.S. move toward deployment space weapons, the first and best option for China is to pursue an arms control agreement to prevent not just the United States but any nation from doing so – as it is advocating presently. However, if this effort fails and if what China perceives as its legitimate security concerns are ignored, it would very likely develop responses to counter and neutralize such a threat. Despite the enormous cost of space-based weapon systems, they are vulnerable to a number of low-cost and relatively low-technology ASAT attacks including the use of ground-launched small kinetic-kill vehicles, pellet clouds or space mines. It is reasonable to believe that China and others could resort to these ASAT weapons to counter any U.S. space-based weapons.13 This, however, would lead to an arms race in space. To protect against the potential loss of its deterrent capability, China could potentially resort to enhancing its nuclear forces. Such a move could, in turn, encourage India and then Pakistan to follow suit. Furthermore, Russia has threatened to respond to any country’s deployment of space weapons.14Moreover, constructing additional weapons would produce a need for more plutonium and highly enriched uranium to fuel those weapons. This impacts China’s participation in the fissile material cut-off treaty (FMCT).15 Eventually, failure to proceed with the nuclear disarmament process, to which the nuclear weapon states committed themselves under the Non-Proliferation Treaty, would damage the entire nuclear nonproliferation regime itself, which is already at the breaking point. As Hu Xiaodi, China’s ambassador for disarmament affairs, asked, “With lethal weapons flying overhead in orbit and disrupting global strategic stability, why should people eliminate weapons of mass destruction or missiles on the ground? This cannot but do harm to global peace, security and stability, and hence be detrimental to the fundamental interests of all States.”16Worsening space environment Weaponizing space would further exacerbate current problems with space debris.17 Even

**[CARD CONTINUES]**

Coop Solves – Space Race (3/3)

**[CARD CONTINUED, NO TEXT REMOVED]**

worse, some scientists warn that if a number of satellites are destroyed in the course of a war, the Earth would be encased in a cloud of debris that would prevent future satellite stationing and space access.18 Given concerns over the space debris issue, senior scientists in China have emphasized that preventing environmental pollution should not only apply on Earth, but should also apply in outer space. As Xiangwan recently noted, “prevention of pollution in space should be put on an agenda and as time goes by, this problem will become increasingly obvious.” He further states: “In preventing space pollution, the following two issues are worth noticing: space garbage and weaponization of space.” “[W]eaponization of space is more dangerous than ordinary space garbage,” since “it will seriously pollute space” and “it will threaten peace and stability on the Earth.”19Some Measures for Space Security As discussed above, the cumulative effect of space weaponization by the United States would undermine global security and the peaceful use of outer space by all nations. If Washington wants to reduce the potential vulnerability of itsspace assets, there are a number of ways to improve space security. Weaponizing space can only erode this security. As Ambassador Hu recently emphasized, “for ensuring security in outer space, political and legal approaches are more be effective, while resorting to force and the development of space weapons will only becounter-productive.”20There are technical approaches, which, if implemented unilaterally, could improve the survivability of space systems. The United States and others could, for example, harden or shield the most vulnerable parts of their satellites (such as the solar cells and the focal planes) against nuclear, laser, or other conventional attacks. In some cases (e.g. nuclear explosion),

hardening satellites would be difficult but technically feasible. To avoid paralysis of a whole system, redundant capabilities could be made available for rapid replacement of satellites in orbit. Increased maneuverability, enhanced situational awareness, and improved stealth capability, would also make it easier to evade a hostile attack.21Furthermore, a number of measures could be taken to secure space assets by multilateral rules or agreements. Specific rules or agreements for space use might include, for example, “keep-out zones,” a non-interference rule for satellites, cooperation on reducing space debris, notification of space launch, development of safe traffic management procedures, and building a hotline between major missile and space powers. These “rules of the road” would be intended to reduce suspicion and encourage the orderly use of space. However, it should be noted that the above technical measures and rules, although important for reducing present risks, would not remove the implicit threat of ASAT attacks. A potential rule on “keep-out-zones” would not prohibit an attack by a space-based laser at long distance. Technical solutions are unlikely to suffice in the absence of strengthened international agreements on space activity. In addition, hardening satellites would be extremely costly, and potentially infeasible, in particular for civilian and commercial satellites. It would impair the operational flexibility of satellites.

\*\*\* ASATs Advantage

Space Race – US Drives Chinese ASAT Acquisition (1/2)

China’s perception of US control over space caused them to develop ASATs as a security measure

Hagt, director of the China Program at the World Security Institute, 2007

(Eric, “China’s ASAT Test: Strategic Response,” China Security, Issue No.5, p. 35, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=187&Itemid=8>, Accessed June 30, 2011, NS)

In the past decade, China has derived a number of key conclusions from its observations of U.S. military activities in space that have fundamentally shaped China’s own strategic posture. The first is the profound implications of space for information and high-tech wars. China witnessed with awe and alarm the power of the U.S. military using satellite communication, reconnaissance, geo-positioning and integration capabilities for an impressive show of force beginning first with the Gulf war in 1991 to the recent campaign in Afghanistan and Iraq.1 The U.S. military’s almost complete dependence on space assets has also not escaped the close examination of Chinese analysts.2 Coupled with a number of key U.S. policy and military documents that call for control in space and the development of space weapons as well as the U.S. refusal to enter into any restrictive space arms control treaty, China has concluded that America is determined to dominate and control space.3 This perceived U.S. intent leads Beijing to assume the inevitable weaponization of space.4 Even more worrisome for China is the direct impact of these developments on China’s core national interests. The accelerated development of the U.S. ballistic missile system, especially as it is being developed in close cooperation with Japan, has been cited as threatening China’s homeland and nuclear deterrent.5 The ‘Shriever’ space war games conducted by the U.S. Air Force in 2001, 2003 and 20056 strongly reinforced the conclusion that U.S. space control sets China has concluded that the United States is determined to control space. Eric Hagt China Security Winter 2007 33 China as a target.7 Most central to China’s concerns, however, is the direct affect U.S. space dominance will have on China’s ability to prevail in a conflict in the Taiwan Straits.8 As U.S. military space developments have evolved, China’s observations and subsequent conclusions have engendered a fundamental response: we cannot accept this state of affairs. For reasons of defense of national sovereignty as well as China’s broader interests in space – civilian, commercial and military – America’s pursuit of space control and dominance and its pursuit to develop ASATs and space weapons pose an intolerable risk to China’s national security.9 China’s own ASAT test embodied this message. Attempting to redress what China perceives as a critically imbalanced strategic environment that increasingly endangers its interests, China demonstrated a deterrent to defend against that threat. Its willingness to risk international opprobrium through such a test conveys China’s grim resolve to send that message. This still leaves unanswered nagging questions about: who made the decision, who was party to the decision, when was the decision made, and its significance for China’s intentions in space. Knowing the answers to some of these important issues may do little to temper the detrimental effects of the test, but can hopefully provide clues as to how the United States and the international community can respond

Space Race – US Drives Chinese ASAT Acquisition (2/2)

China’s ASAT testing could only stem from external motivators, such as the threat of US space dominance

Hagt, director of the China Program at the World Security Institute, 2007

(Eric, “China’s ASAT Test: Strategic Response,” China Security, Issue No.5, p. 35, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=187&Itemid=8>, Accessed June 30, 2011, NS)

This urgency to address China’s rising security concerns is also evidenced by the call within key military institutes around the 2003-2005 timeframe to create a dedicated military space command with a stated purpose of tackling the growing strategic and national security threats in space.22 The driving force behind this new command system appears to be the PLA General Armament Department (GAD) or the closely related Armament Academy (AA).23 Presently, command over civilian space experiment activities is roughly divided between the State Council, the Central Military Commission (CMC) and functional sections of the GAD.24 Although the institutional hierarchy of China’s military space program is not fully understood, military space activities are probably led by the CMC and the PLA General Chief Department, with significant personnel coming from the GAD.25 Under a new powerful supreme command department for space, an agency with the Chinese president as the supreme commander, military space would take on a new priority in terms of budgeting and military and political authority; similar to what occurred with the Second Artillery, China’s strategic force, upon its establishment.26 While a space command and space forces may not have formally taken shape, the call for them strongly indicates the need for the military to seriously counter perceived threats to its national security challenges in space.27 China’s increasingly heightened sense of insecurity in space and its calls for a separate space command in response to the U.S. drive for space control have additional significance for the development of its military space initiatives and its eventual ASAT test. These trends have driven the establishment of domestic institutional and industrial constituencies that have taken root in the system and are vying for political and economic influence and authority. This phenomenon is certainly not unique to China as the experience of bureaucratic agencies in the United States will attest.28 With deepening institutional interests, such agencies naturally evolve a degree of imperviousness to outside influence. The closed and nontransparent nature of China’s military establishment, which largely runs the space program, only exacerbates this tendency. The sum of these realities suggests that once set in motion, national defense considerations planned over a long period to address security threats may be China’s ASAT Test: Strategic Response influenced to a degree by external factors but cannot be altered at the whim of those factors.29 In this sense, China’s space program may have been less malleable to altering its course of developing as a military hedge than has been hoped

Chinese Space Power High – ASATs

China is capable of destroying most of America’s satellites

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. 1-2, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA539619, accessed 6/29/11) EK

In addition to the direct-ascent ASAT capability demonstrated in January 2007, China has invested in the research of a range of counterspace technologies.4 Again, the January 2007 test was a demonstration of a direct-ascent ASAT. “Direct-ascent weapons are particularly effective against satellites flying in Low Earth Orbits (LEO), where most of America’s remote sensing, meteorological, and imaging intelligence satellites, and their associated relays, currently operate.”5 While China does have the spacelift capability to launch objects into Medium Earth Orbits (MEO) and geostationary orbits, using larger rockets would “alter the dynamics for an effective hit-to-kill kinetic kill vehicle, making their current ASAT design unusable for such purposes.”6 This is not to suggest the People’s Republic of China (PRC) will never obtain this capability in the future.

China will be able to develop ASATs capable of reaching the MEO

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. 1-2, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA539619, accessed 6/29/11) EK

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China Weaponizing Now – ASAT (1/2)

China’s anti-satellite capabilities are becoming a threat to the US

Gertz, Defense Reporter Washington Times, 3/10/11

(Bill – Defense and national Security Reporter for the Washington Times, Inside the Ring, 3/10.11, Washington Times Pg. 8, Lexis) AC

ASAT missile defense China used a top-secret SC-19 anti-satellite (ASAT) missile in a test last year against a target missile as part of a missile-defense system that remains shrouded in secrecy. The ASAT missile was fired against a new medium-range missile and details were disclosed in a State Department cable made public recently by WikiLeaks that included an outline of a diplomatic protest note to Beijing about both Chinese weapons programs. The cable provides the first detailed U.S. assessment of what defense officials say is a major strategic advancement in China's military buildup. It reveals that China's anti-satellite system was developed for use not only against satellites but is part of a larger strategic missile-defense system. Defense Secretary Robert M. Gates offered to hold strategic talks with China on missile defenses, as well as space, nuclear and cyberweapons, during a recent visit to Beijing. The offer was rebuffed by China's defense minister, who said only that it would be studied. Defense officials and private specialists said the cable further highlights official Chinese government duplicity in opposing U.S. missile defenses and promoting an international agreement to limit weapons in space at the same time it is secretly working on its own space weapons and missile defense programs. Details of the Chinese SC-19 test are not expected to be included in the Pentagon's annual report to Congress on the Chinese military that was due March 1 but remains under review by the Obama administration. Chinese state-run media announced the January 2010 test in a two-sentence statement that made no mention of the use of the SC-19. The SC-19's first successful test destroyed a Chinese weather satellite in January 2007, resulting in thousands of pieces of debris in orbit that remain a threat to both manned and unmanned space flight. The current U.S. strategic missile defense has no direct capabilities for shooting down satellites. However, the Navy modified a ship-based SM-3 anti-missile interceptor to shoot down a falling U.S. satellite in 2008. Chinese Embassy spokesman Wang Baodong repeated the comments of a Foreign Ministry spokesman who said the 2010 test was "defensive in nature and targeted at no country." "The U.S. Intelligence Community assesses that on 11 January 2010, China launched an SC-19 missile from the Korla Missile Test Complex and successfully intercepted a near-simultaneously launched CSS-X-11 medium-range ballistic missile launched from the Shuangchengzi Space and Missile Center," the State Department cable said. Little is known about the CSS-X-11, which could be an extended-range variant of the CSS-7 short-range missile. U.S. missile warning satellites detected the launches and the intercept some 155 miles in space but detected no debris, the cable said. "An SC-19 was used previously as the payload booster for the January 11, 2007, direct-ascent anti-satellite (DA-ASAT) intercept of the Chinese FY-1C weather satellite," the cable said. "Previous SC-19 DA-ASAT flight-tests were conducted in 2005 and 2006. This test is assessed to have furthered both Chinese ASAT and ballistic missile defense (BMD) technologies." The cable said the U.S. government in its protest would not disclose that it knows China's ASAT and missile defense programs are linked. The draft demarche demanded to know the purpose of the test and whether it is part of a missile-defense system; whether China plans to deploy missile defenses for its forces and territory; what "foreign forces" is China planning to target with the missile defenses; and whether China tried to limit space debris. The protest note also said that, if asked by the Chinese about U.S. objections to anti-satellite tests, they should state: "U.S. concerns voiced at the Conference on Disarmament and at the United Nations are still valid and reflect the policy of the <CONTINUED>United States." China apparently gave in to U.S. and international pressure and since January 2007 has not conducted another ASAT test. Mark Stokes, a Chinese arms specialist with the 2049 Institute, a think tank, said the missile-defense system was significant. "The space-intercept test conducted last year further demonstrates advances that China has made in its ability to track and engage targets in space, whether satellites or ballistic missiles," Mr. Stokes said. John Tkacik, a former State Department China specialist, said he was surprised that the Pentagon did not disclose the link between the missile-defense test and China's anti-satellite system. "All we got last year was Assistant Defense Secretary Chip Gregson vaguely saying that the U.S. was seeking an explanation," Mr. Tkacik said. "We <CONTINUED> <CONTINUED> have since been stiff-armed by the Chinese in every proposal we've made to sit down and discuss rules of the road on space and strategic weapons. But the Obama people apparently are trying to play-down China's BMD capabilities." Mr. Tkacik said the Obama administration was so overly focused on arms talks with the Russians aimed at reducing nuclear arsenals that it neglected U.S. missile defenses and ignored China's advances in that weaponry. "We have to start taking China's space capabilities very seriously," he said. "The Chinese have a dozen academies filled with world-class space and missile scientists, they know what they're doing, and they have unlimited funds to do it with."

China Weaponizing Now – ASAT (2/2)

**China is already developing a substantial ASAT capability**

**Kueter, George C Marshall Institute president, 7**

(Jeff – President of the George C Marshall Institute: a DC Think Tank, China's Space Ambitions -- And Ours, New Atlantis, Pg. 7-22 No. 16, Lexis) AC

China's January ASAT demonstration followed years of work on a variety of related weapons. In September 2006, reports surfaced in the press that China had for several years successfully used ground-based lasers to blind U.S. reconnaissance satellites. These blinding tests seem intended to demonstrate the capability to pinpoint, track, and "illuminate" American spy satellites. Blinding a spy satellite's optical and infrared imaging systems could result in either temporary or permanent damage, depending upon the delivered power of the beam and the sensitivity and protections built into the satellite's sensors. (The United States first ran its own such laser tests a decade ago, when the Navy's ground-based Mid-Infrared Advanced Chemical laser was used to illuminate an aging Air Force satellite.) Strategically, such a capability could, for example, help the Chinese hide military preparations or prevent U.S. forces from responding in a timely fashion to a Chinese move against Taiwan. China's People's Liberation Army (PLA) is apparently developing techniques to jam other kinds of satellites as well. Articles in some PLA journals have discussed how broad-spectrum or narrow-frequency jamming can be used against navigation satellites; others have focused on jamming space-based radar, which is used (although not extensively) by the U.S. for military intelligence. There are also strong indications that the PLA is developing microsatellites that could collide with enemy satellites to damage and disable them. When seen in combination with the PLA's express interest in maneuverability and on-orbit rendezvous, the existence of the microsatellite program strongly suggests the Chinese are seriously investigating (and perhaps investing in) space-based ASATs. In a word, China is now unquestionably a first-tier space power, comparable to the United States and Russia. Not only does China have the capacity to exploit space for its own purposes, but the ASAT test demonstrated a Chinese capability to deny other nations that same capacity. This may be an emerging capability; it may be a limited one; but it is also now an actual, rather than potential, capability--and one with distinct diplomatic and political implications.

China’s ASAT efforts prove its leanings towards militarizing space

Sabathier, senior associate with the CSIS Technology and Public Policy Program, Faith, president of Sabathier Consulting for public and private aeronautics policy, 2011

(Vincent G., G. Ryan Faith, “The Global Impact of the Chinese Space Program,” World Politics Review, <http://www.worldpoliticsreview.com/articles/8878/the-global-impact-of-the-chinese-space-program>, May 17, Accessed July 1, 2011, NS)

Meanwhile, on the military side, China has clearly understood the role of space in military operations and is quietly developing these capabilities. Indeed, it has observed the great asymmetric advantage the U.S. was able to derive from these capabilities from the 1991 Gulf War onward. Perhaps even more importantly, it also understands the asymmetric vulnerability of the U.S. military's space-based assets. Anti-satellite (ASAT) warfare had been regarded as a strategic war-fighting relic of the Cold War. However, allegations about Chinese ASAT efforts, ranging from attempts to blind and jam satellites over the past 20 years to the 2007 demonstration of an active ASAT weapon, have shown that China continues to consider space to be a potential battleground. Globally, the space community remains at an impasse between Chinese and Russian efforts to pursue a space-weapons treaty, which the U.S. regards as being neither equitable nor verifiable, and the European Union's proposed Code of Conduct, which has received strong U.S. support but which the Chinese feel is a ploy intended to give a pass to U.S. missile defense efforts that could negate China's minimalist nuclear deterrent.

ASATs Bad – Impact Laundry List

A space war between China and the US would impact the US’s space heg, spark an arms race with other countries, spark a war between China and the US over Taiwan, and kill any treaty banning the weaponization of space

Seedhouse, aerospace scientist & PhD from German Space Agency's Institute of Space Medicine, 10

(Erik, “The New Space Race: China vs. the US” Springer and Praxis Publishing Co., <http://www.scribd.com/doc/31809026/The-New-Space-Race-China-Vs>, accessed: 6/30/11, SL)

Consequences of counter counter-space operations. It would seem that America's vast counter-counterspace capabilities mean China will likely lose any future conflict with the US, and lose badly. However, China's ASAT test is not an anomaly, but an attempt to develop counterspace weapons capable of constraining America's ability to exploit space in a conflict over Taiwan. Gradually. China's counterspace programs will develop and diversify, as Beijing endeavors to negate the operational advantages of Washington's space dominance. Regardless of whether Beijing's counterspace enterprise succeeds or fails, certain consequences are inevitable. Perhaps the most significant outcome is the death of any agreement banning the deployment, testing, and deployment of space weapons. Given that counterspace operations represent the best chance China has of asymmetrically defeating American military power, there is no way Beijing will agree to space arms control, despite its rhetoric to the contrary. In the absence of such an agreement. Washington and Beijing will be free to embark upon the deployment of weapons in LEO. GEO. and all points in between, in an arms race in space that will put the civilian space race to the Moon in the shade. A second consequence is the serious threat to American space dominance. Often taken for granted. US space dominance is now threatened by Chinese space-denial programs, exceeding those by Moscow at the peak of the Cold War in both diversity and depth. The US and the Soviet Union were peer competitors, with neither country being hostage to the fears accompanying the power transition that may occur between Beijing and Washington. Such a power transition represents a situation in which China fears being denied the opportunity to secure space domination and the US fears incipient loss of power and influence. To ensure and maintain space dominance, the US will undoubtedly accelerate investment in the areas of systems hardening, autonomous operations, and onboard active defenses. It will also probably build reserve satellites, rapid-response space-launch capabilities, and mobile control stations capable of managing LEO operations in the event of damage to primary control centers. Once again, the consequences of these actions will be an increase in the deployment of weapons in space. The third consequence is the growth of Chinese space capability as it attempts to ensure deterrence in the event of a conflict with the US over Taiwan. A robust Chinese counterspace capability means such a conflict could result in serious instabilities, perhaps even provoking Beijing to attack the US at the beginning of the conflict, in a "Space Pearl Harbor" approach.' Such an attack would inevitably cause the US to retaliate with pre-emptive attacks of its own. Lastly, the pursuit of lull Spectrum Dominance by the US marks the end of the era of detente. In the first iteration of the aims race, the US. Soviet Union. France. UK. and China adopted the theory of detente as a means of maintaining a nuclear stalemate and to prevent a nuclear exchange. Now, with the demise of the Soviet Union, the US is fashioning its own concept of international relations based on domination and superiority. As the US domination regime gal hers speed with the development of ever more sophisticated space weapons and the deployment of space

ASATs Bad – US Retaliation/ War

US retaliation leads to war

Scott, Aviation Week and Space Technology editor, 8

(William B., Editor of Aviation Week and Space Technology, “CHINA’S PROLIFERATION PRACTICES, AND THE DEVELOPMENT OF ITS CYBER AND SPACE WARFARE CAPABILITIES,” Hearing before the US-China Economic and Security Review Commission, May 20, 2008, Pg. 19-20, JSkoog)

So clearly China has become a world-class space faring nation. But that nation's excessive secrecy forces us to ask: what are China's motivations for developing a robust space program? Should we view it as a threat or as an opportunity? On the threat side, China has developed relatively low-cost asymmetric capabilities to disable our communications, navigation, weather, ISR resources by disabling or destroying key satellites with an ASAT missile. But China may also pose a stealth threat as well. It may already have launched a fleet of micro or nanosatellites and positioned them in close proximity to critical U.S. communications and missile-warning satellites in geostationary orbit, for instance. Because our space situational awareness resources are limited, we might never find these tiny killersats until they strike. From a national security perspective, prudence dictates that U.S. military leaders view China's growing space presence and capability as potential threats, then find ways to counteract them. However, we need to be very careful in exercising counterspace measures. For example, in our second Space Wars book—which is fiction -- and is to be released later this year -- my coauthors and I explore the ramifications of disabling Chinese imaging satellites. We show how temporarily blinding the PLA spacecraft as a means of protecting our own naval forces could unintentionally lead to a shooting war.

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American policy ensures that any ASAT use would escalate to war.

MacDonald, Council on Foreign Relations, ‘8

(“China, space weapons, and U.S. security” By Bruce W. MacDonald, Council on Foreign Relations, 2008, <http://books.google.com/books?hl=en&lr=lang_en&id=o0GkabrNftIC&oi=fnd&pg=PP2&dq=china+space&ots=OTkniE7uA-&sig=wC4ye20QpZY-ECCnrpPTf-Tr9yY#v=onepage&q&f=false>, p. 3, 6.30.10, SWolff)

Even the latter two cases would involve significant risk of escalation. The administration has stated that "the current preferred approach to protect U.S. terrestrial forces from space threats is through the use of temporary and reversible effects," though this has not been confirmed as official policy.14 China's ASAT test, however, led to a major U.S. reaction, and a potential action-reaction cycle appears likely. If China deployed direct ascent ASATs (ground-launched missiles that fly directly at their space targets, such as the ones China tested in 2007), these would become high-priority targets for the United States in a crisis or actual conflict due to the threat they would pose. General James F.. Cartwright told Congress that the United States is prepared to strike land-based Chinese ASAT launchers if China shoots down U.S. satellites. Such a statement may help dissuade China from attacking U.S. satellites in a crisis, but, if actually carried out, it would inflict many casualties and risk serious escalation. This highlights the disparity between deterrence and war-fighting strategies. At a minimum, such statements would give China an incentive to make their ASAT systems mobile.

ASATs Bad – Hegemony – China Asymmetrical Advantage (1/2)

**ASAT capabilities give china an asymmetrical advantage that will allow them to cripple the US military**

**Kueter, George C Marshall Institute president, 7**

(Jeff – President of the George C Marshall Institute: a DC Think Tank, China's Space Ambitions -- And Ours, New Atlantis, Pg. 7-22 No. 16, Lexis) AC

The Chinese military comprehends just how reliant the United States has come to be on its satellites. "Space capabilities are inextricably woven into the fabric of American security, scientific, and economic activities," Lieutenant General C. Robert Kehler, the deputy commander of U.S. Strategic Command, told a congressional subcommittee in 2006. From television to shipping to weather reports to airplane navigation, most Americans interact indirectly with satellites every day. Beyond those obvious civilian applications, satellites have had a profound effect on the U.S. military. America's military space systems serve five broad missions: communications; position, navigation, and timing; integrated tactical warning and attack assessment; intelligence, surveillance, and reconnaissance; and environmental and weather monitoring. Taken together, those space-based functions have transformed the American conduct of war on land, at sea, and in the air. By integrating those space-based functions into operations, we can use precision strikes from a distance to put fewer U.S. forces in harm's way, and we can improve coordination and reduce confusion when we must put boots on the ground. American space-based assets have enhanced military logistics and have made it possible to collect and rapidly disseminate intelligence almost in real-time. They make our military more effective and lethal, while simultaneously reducing unintended casualties and improving the safety of our forces. This is a remarkable change from the Cold War days, when the principal national security function of space was reconnaissance. Satellites brought a degree of transparency and stability to the U.S.-Soviet "balance of terror." Under the prevailing doctrines of massive retaliation and mutual assured destruction, the ability to quickly detect one another's missile launches ensured that either side could launch its own missiles before they were destroyed, thus precluding the possibility of a winnable nuclear exchange and discouraging launches in the first place. Today, though, the United States uses space in a fundamentally different way. Space assets no longer just tell us where our enemies are and what they are doing; they are integrated with the weapon systems used to target and destroy. This new capability, however, also creates a new potential vulnerability. "Far more than any other country, the U.S. depends on space for national and tactical intelligence, military operations, and civil and commercial benefits," as Robert L. Butterworth, president of the space consultancy Aries Analytics, recently put it. This "provides a clear incentive for attacking American spacecraft." Such an attack on American satellites would not have to be very extensive to be devastating--as long as it were well-planned. "Even a small-scale anti-satellite attack in a crisis against fifty U.S. satellites (assuming a mix of targeted military reconnaissance, navigation satellites, and communication satellites) could have a catastrophic effect not only on U.S. military forces, but [on] the U.S. civilian economy," according to a recent report by China analyst Michael Pillsbury. There are numerous ways our space assets could be disabled or destroyed. One likely threat to U.S. space assets resides in a very terrestrial environment: strikes against ground stations and launch systems. Such attacks could constrain the usefulness of our existing satellites or reduce our ability to put new satellites into orbit. But such ground attacks would probably, at worst, only diminish our ability to use our space assets, since the data transmitted from orbiting satellites could in most cases be rerouted to other receiving stations on the ground, and since our launch systems are (somewhat) redundant. Of more concern is the possibility of attacks that directly destroy or damage satellites, since they cannot at present be replaced quickly, easily, or cheaply. Without a reorientation of the way it acquires space hardware, the United States faces substantial barriers to repairing or replacing damaged satellites. The Chinese test in January demonstrated what is known as a direct ascent anti-satellite capability, wherein an object, presumably a missile, is launched from Earth or from an airplane in flight at a target overhead in space. The missile slams into the targeted satellite and the energy created by the collision of two fast-moving objects destroys both. Such "kinetic kill" interceptions are well understood, were demonstrated by both the United States and the Soviet Union during the Cold War, and now underpin the U.S. ballistic missile defense program. Another technique to destroy satellites involves co-orbital ASATs, which are placed into orbit where they wait for a period of time before they are sent to destroy their <CONTINUED>

ASATs Bad – Hegemony – China Asymmetrical Advantage (2/2)

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target. The Soviet Union built and tested a co-orbital ASAT system in the 1970s and early 1980s. While the PLA's apparent interest in microsatellites could imply some such capabilities, it is unclear how far Chinese research in this area may have progressed. Other space-based ASATs could, in theory, disable satellites from a distance using directed-energy weapons--lasers, particle beams, or high-energy radio-frequency weapons--although none of these has yet been deployed on platforms in space. Another type of threat to space assets is high-altitude nuclear detonation. An enemy could arm a missile with a nuclear warhead, launch it, and explode the warhead in space. All satellites within the line of sight of the explosion would be destroyed or rendered ineffective immediately, with the effects dissipating with distance from the explosion. What's more, the radiation released by a single low-yield, high-altitude nuclear explosion "could disable--in weeks to months--all low-Earth orbit satellites not specifically hardened to withstand the radiation generated by that explosion," according to the Defense Threat Reduction Agency. Most U.S. satellites--including those commercial satellites that are used extensively for defense communications--are not hardened to withstand such an attack, and they lack the maneuvering capabilities needed to "get out of the way" of the attacking missile, the explosion, or the radioactive effects. China certainly has the missile and nuclear capabilities required to conduct such an attack. (So, too, do the United States, Russia, the United Kingdom, France, and possibly Israel, India, and Pakistan. North Korea apparently lacks the missile competence, and Iran probably does not have either the missile or nuclear know-how--as of this writing.) Needless to say, this most extreme measure would likely be attempted only in times of acute international crisis. But even aside from destroying or damaging satellites, there is a multiplicity of ways space systems can be disrupted so as to preclude their use. The electromagnetic transmissions between satellites and the ground can be jammed (that is, blocked or drowned out) or spoofed (that is, imitated with fake signals that appear legitimate). Military and commercial satellite users have ways to prevent some jamming attacks, and encryption can protect against spoofing, but these remain realistic concerns. As General Kehler told Congress last year, "GPS jamming has occurred, as has jamming of commercial telecommunications satellites.... Open-source reporting has cited examples of incidents, both intentional and unintentional, that have impacted space capabilities." Well-publicized instances include the jamming of a Chinese TV satellite by the Falun Gong religious movement in 2002; Iran's jamming of various satellites starting at least in 2003; and Libya's jamming of various communications satellites in 2005. "While none of these incidents proved catastrophic," as General Kehler said, "our enemies clearly understand the reliance we place in our space capabilities and we should expect the level and sophistication of efforts to deny us the advantages of space to increase in future conflicts."

ASATs Bad – Hegemony – China Will Take Space (1/2)

**China is attempting to take the “new strategic high ground” in order to secure a military advantage that cannot be overcome**

**Kueter, George C Marshall Institute president, 7**

(Jeff – President of the George C Marshall Institute: a DC Think Tank, China's Space Ambitions -- And Ours, New Atlantis, Pg. 7-22 No. 16, Lexis) AC

Why, then, has China been aggressively pursuing new capabilities in space and building space-weapons systems? One obvious reason is that the country's space program is a source of both tremendous international prestige and domestic patriotic pride. It is a dramatic illustration of China's technical prowess and achievement, and a reflection of the country's emergence as a great power. While the space program has economic and technical benefits that themselves contribute to China's reputation, the program's very existence boosts the country's standing in a way that supports its larger foreign policy objectives. And as a matter of pride for the people, it is an important consideration for the regime. The space program is "promoting China's economic, scientific, and national defense capabilities as well as its national cohesiveness," says the head of the National People's Congress; space achievements "inspire greater patriotic passion, national pride and cohesion," says the head of the country's manned space program; it increases "China's international prestige and the cohesive power of the Chinese nation," says a leading Chinese scientist; when the first Chinese astronaut was launched, television advertisements called for "patriotic fervor and national cohesion" (emphases added). The Chinese regime clearly believes the space program helps to unify the country--not unlike the upcoming Beijing Olympics. A more important motivation for China's investment in civil and military space is of course the country's perception of its security environment and its understanding of the evolution of modern warfare. The Chinese have concluded from observing recent wars--including Operation Desert Storm, NATO operations in the Balkans, and the present wars in Afghanistan and Iraq--that "the PLA's past approach to wars, which relied heavily on mass mobilization and preparation for all-out warfare, are frankly no longer appropriate," according to China scholar Dean Cheng of the Center for Naval Analyses. Chinese analysts have reached several conclusions about the characteristics of future wars. They will extend from operations on the land, at sea, and in the air to the electromagnetic spectrum and into outer space. They will demand widely spread forces, operating over large geographic areas, demonstrating precise operational coordination and timing, and requiring multiple military services working together. Future wars will be characterized by long-range operations, involve the decisive use of precision-strike weapons, and require much higher rates of expenditure of munitions. Operations will occur more rapidly and conflicts will conclude more quickly. American strategists have reached similar conclusions, as is reflected in the doctrines of the U.S. military services, embodied in the annual U.S. defense budgets, and written into recent Quadrennial Defense Reviews. These conclusions have shaped China's overall military modernization efforts as well as its outer-space ambitions. As a 2006 study from the Center for Strategic and International Studies and the Institute for International Economics puts it, China has recognized "the increasing importance of information technology in modern warfare. China's leaders have no illusions that the People's Liberation Army is a match for the U.S. military. What China does seek are niche capabilities to exploit U.S. vulnerabilities in order to deter, complicate, and delay, if not defeat, U.S. (or other) intervention in a Taiwan scenario." Among the niche capabilities of particular interest to China, according to a 2006 report from the U.S.-China Economic and Security Review Commission, is the ability "to disrupt [an] adversary's C4ISR [Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance] advantages through such means as attacking its computer and communications systems. Accordingly, the PLA is establishing information warfare units and capacities, and developing anti-satellite capabilities [and] space warfare weapons." Chinese military scholars often refer to space as the new strategic high ground; they recognize the importance of achieving space dominance in a conflict so as to protect Chinese space systems and to deny opponents access to their own space systems. "The same information technologies and improved sensor systems that make modern weapons much more destructive effectively make outer space a key battleground," Cheng says. "Without control of space, at least at the local level, PLA authors suggest it <CONTINUED>

ASATs Bad – Hegemony – China Will Take Space (2/2)

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is virtually impossible to gain or maintain air or naval dominance, which in turn then makes winning a war much more problematic." China clearly recognizes that the transformation in modern warfare, driven by information technology and dependent upon space, represents both a significant challenge and an opportunity for its security. The challenge is that space dominance confers tremendous military advantages in terms of speed, lethality, accuracy, and reach. In this understanding, whoever gains space dominance will be able to influence and control other battlefields; a combatant without space dominance is likely to lose the initiative. The control of space is thus simultaneously a goal of and an essential enabler of military operations; it will be both a means and an end for future warfare. The opportunity is that the United States can be challenged by a nation possessing China's space capabilities.

ASATs Bad – Hegemony – US Hard Power (1/3)

Chinese ASATS have the potential to destroy American space dominance and spark war.

MacDonald, Council on Foreign Relations, ‘8

(“China, space weapons, and U.S. security” By Bruce W. MacDonald, Council on Foreign Relations, 2008, <http://books.google.com/books?hl=en&lr=lang_en&id=o0GkabrNftIC&oi=fnd&pg=PP2&dq=china+space&ots=OTkniE7uA-&sig=wC4ye20QpZY-ECCnrpPTf-Tr9yY#v=onepage&q&f=false>, p. 3, 6.30.10, SWolff)

On January II. 2007, China launched a missile into space, releasing a homing vehicle that destroyed an old Chinese weather satellite. The strategic reverberations of that collision have shaken up security thinking in the United States and around the world. This test demonstrated that, if it so chose, China could build a substantial number of these anti-satellite weapons (ASAT) and thus might soon be able to destroy Substantial numbers of U.S. satellites in low earth orbit (LEO), upon which the U.S. military heavily depends. On February 21, 200S, the United States launched a modified missile-dele use interceptor, destroying a U.S. satellite carrying one thousand pounds of toxic fuel about to make an uncontrolled atmospheric reentry. lints, within fourteen months, China and the United States both demonstrated the capability to destroy L.E.O. satellites, heralding the arrival of an era where space is a potentially tar more contested domain than in the past, with few rules. Having crossed a space Rubicon with their ASAT demonstrations, neither nation can un-invent these capabilities. As the United States approaches major security policy reviews with the advent of a new administration in early 2009, both it and China face fundamental choices about the deployment and use of such capabilities, and the development of more advanced space weapons.' The United States and China stand at a crossroads on weapons and space: whether to control this potential competition, and if so. how. While the United States is likely well ahead of China in offensive space capability. China currently is much less dependent on space assets than the U.S. military, and thus in the near term has less to lose from space conflict if it became inevitable. China's far smaller space dependence, which hinders its military potential, ironically appears to give it a potential relative near-term offensive advantage: China has the ability to attack more U.S. space assets than vice versa, an asymmetry that complicates the issue of space deterrence, discussed later. This asymmetric Chinese advantage will likely diminish as China grows increasingly dependent on space over the next twenty years, and as the United States addresses this space vulnerability. Thus, the time will come when the United States will be able to inflict militarily meaningful damage on Chinese space-based assets, establishing a more symmetric deterrence potential in space. Before then, other asymmetric means are available to the United States to deter China, though at possibly greater escalatory risk. Thai is. the United States could threaten to attack not just (Chinese space assets, but also ground-based assets, including ASAT command-and-control centers and other military capabilities. Itut such actions, which would involve attacking Chinese soil and likely causing substantial direct casualties, would politically weigh much heavier than the U.S. loss of space hardware, and thus might climb the escalatory ladder to a more damaging war both sides would probably want to avoid. War between China and the United States seems unlikely, given their increasing economic interdependence and ongoing efforts in both countries to improve relations. Looming in the background, however, is the possibility of war over Taiwan, a plausible if unlikely scenario that could bring the United States and China into conflict. China might then be tempted to attack U.S. military satellites as a casualty-free way to signal resolve, dissuade Washington from further involvement in a Taiwan conflict, and significantly compromise U.S. military capabilities if such dissuasion failed. Such Chinese actions could well escalate any conflict between the United States and China. As a result, both countries have interests in avoiding the actual use of coil liters space weapons and shaping a more stable and secure space environment for themselves and other space-faring nations, which could easily be caught in the undertow of a more militarily competitive space domain. Many nations benefit from space assets used for military purposes, including communications, reconnaissance, and positioning.

ASATs Bad – Hegemony – US Hard Power (2/3)

War in space kills any advantages the US has

Martel and Yoshihara, The Center for Strategic and International Studies and the Massachusetts Institute of Technology, 3

(William C. Martel is a professor of national security affairs at the Naval War College in Rhode Island. Toshi Yoshihara is a doctoral candidate at the Fletcher School of Law and Diplomacy, Tufts University, and a research fellow at the Institute for Foreign Policy Analysis in Massachusetts., “Averting a Sino-U.S. Space Race” The Washington Quarterly 26.4 (2003) 19-35, <http://muse.jhu.edu/journals/washington_quarterly/v026/26.4martel.html>, Accessed July 1, 2011, EJONES)

Conventional wisdom holds that space is so vital to national security and economic prosperity that the United States will do whatever it takes to protect its ability to use space. This rationale was enshrined in an influential report issued in January 2001 by a blue-ribbon commission on space, 1 headed by Donald Rumsfeld before he became secretary of defense, which strongly advocated greater protection for U.S. space assets. The Rumsfeld Commission asserted that "[t]he security and economic well being of the United States and its allies and friends depend on the nation's ability to operate successfully in space. To be able to contribute to peace and stability in a distinctly different but still dangerous and complex global environment, the [United States] needs to remain at the forefront in space, technologically and operationally, as we have in the air, on land and at sea." 2 Furthermore, the report argued that "the present extent of U.S. dependence on space, the rapid pace at which this dependence is increasing, and the vulnerabilities it creates, all demand that U.S. national security space interests be recognized as a top national security priority." 3 In economic terms, the United States relies on space technologies and capabilities to support a wide range of commercial activities. Among the most important commercial assets in space is the constellation of Global Positioning System (GPS) navigation satellites. The precise timing signals emitted from the GPS allow automobiles, aircraft, and ships to locate their positions and establish the chronological order for virtually all financial transactions. Indeed, the global financial network would collapse without GPS. Equally important, commercial satellites carry most global communications. Despite the phenomenal growth rate of fiber optics networks, commercial satellites still dominate long-haul global communications. The United States is extraordinarily dependent on space for its national security. 4 The U.S. military has integrated space technologies into virtually all aspects of military operations, dramatically improving U.S. military power. Since the 1991 Persian Gulf War, which is widely considered the first "space war," the Pentagon has relied on electro-optical, hyperspectral, infrared, and radar satellites to see what is happening on the battlefield. 5 Communication satellites allow military commanders to be connected to their forces, while the navigation signal from GPS satellites is essential for precision attacks. The air campaigns over Kosovo, Afghanistan, and Iraq also demonstrated the value of space assets in modern warfare. Similarly, U.S. military commanders increasingly rely on imagery from commercially owned satellites; in fact, commercial satellites handled 80 percent of U.S. military communications during the Kosovo operation in 1999. 6 [End Page 20] Government agencies often pay private firms to collect and process vital satellite imagery. For the first five months of the Afghan campaign, the Department of Defense paid the Space Imaging Corporation $1.9 million per month for images of Afghanistan collected by its Ikonos imaging satellite. This new commercial satellite market also creates vulnerabilities because of the ability of hostile governments or terrorist organizations to gain access to readily available satellite imagery. Such information could be used to harm U.S. interests in various ways, including attacking military bases and disrupting military operations. In sum, because U.S. military effectiveness and commercial competitiveness depend so overwhelmingly on space, the country is increasingly vulnerable to an adversary's malicious use of space or attacks against space systems. As the Rumsfeld Commission report warned ominously, "If the [United States] is to avoid a 'space Pearl Harbor,' it needs to take seriously the possibility of an attack on U.S. space systems. The nation's leaders must assure that the vulnerability of the United States is reduced and that the consequences of a surprise attack on U.S. space assets are limited in their effects." 7 At present, most nations cannot challenge the United States directly, but there are fears that states might someday attack U.S. satellites to cripple its military capabilities. Policymakers in the United States are increasingly concerned that this is precisely China's strategy.

ASATs Bad – Hegemony – US Hard Power (3/3)

Satellite attacks have significant implications for the U.S. economy and military

MacDonald, White House Office of Science and Technology Policy, former assistant director for national security, 8

(Bruce W., former assistant director for national security at the White House Office of Science and Technology Policy, “China, Space Weapons, and U.S. Security”, Council Special Report, No. 38, September 2008, p.5, <http://books.google.com/books?id=o0GkabrNftIC&printsec=frontcover&dq=us+china+space&hl=en&ei=XSsOTv6QIs_TiALWtdSuBw&sa=X&oi=book_result&ct=result&resnum=1&ved=0CCoQ6AEwAA#v=onepage&q&f=false>, accessed 7/1/11) EK

With China’s demonstration of an ASAT weapon, the United States is concerned that China might soon deploy a substantial ASAT arsenal, consisting of either a fleet of the ASATs it tested in 2007, co-orbital small satellites (“space mines”), or, later, a more advanced ASAT capability based on technologies such as lasers, microwaves or cyberweapons. Such a Chinese deployment could substantially reduce the effectiveness of U.S. fighting forces. While more traditional counterspace capabilities like jammers have a long and well-recognized role in electronic warfare, their effects are localized and temporary and thus can be tailored. Offensive counterspace capabilities could permanently damage or destroy costly satellites and leave substantial harmful debris in space if they physically destroy satellites. The implications of these new counterspace developments for peacetime and crisis stability, as well as the conduct of warfare, are profound. The sudden major loss of satellite function would quickly throw U.S. military capabilities back twenty years or more and substantially damage the U.S. and world economies. While backup systems could partially compensate for this loss, U.S. military forces would be significantly weakened. In addition to shoring up its defenses, the United States also needs to better understand China’s evolving and ambiguous space doctrine.

ASATs Bad – Miscalc

**Magnitude of ASATs impact makes threshold for miscalculation and conflict low**

Seedhouse, aerospace scientist & PhD from German Space Agency's Institute of Space Medicine, 10

(Erik, “The New Space Race: China vs. the US” Springer and Praxis Publishing Co., <http://www.scribd.com/doc/31809026/The-New-Space-Race-China-Vs>, accessed: 6/30/11, SL)

US asymmetric advantage and vulnerability Given the huge difference in financial and technological resources between the US and the rest of the world, many analysts believe the rest of the world will simply allow the US to achieve space dominance. These same analysts relegate China to the position of a minor player, unable to compete with the American military juggernaut. However, as evidenced by China's ASAT test, such a view may be a grave miscalculation. The Chinese have long since recognized America's dominance of space as both an advantage and a potential Achilles' heel, as evidenced by statements such as the following from an article in the Liberation Army Daily: "Currently, space systems have increasingly become systems in which countries' key interests lie. If an anti-satellite weapon destroys a space system in a future war. the destruction will have dealt a blow to the side that owns and uses the space system, stripped it of space supremacy, and weakened its supremacy in conducting information warfare and even its supremacy in the war at large. Anti-satellite weapons that can be developed at low cost and that can strike at the enemy's enormously expensive yet vulnerable space system will become an important option for the majority of medium-sized and small countries with fragile space technology to deter their powerful enemies and protect themselves."5 However, the US realizes that its space systems will be an irresistible and tempting target in any future conflict, and is planning accordingly: "The American military is built to dominate all phases and mediums of combat. We must acknowledge that our way of war requires superiority in all mediums of conflict, including space. Thus, we must plan for. and execute to win. space superiority." General Richard Myers. Chief of Space Command

ASATs Bad – Taiwan Scenario

ASATs are part of China’s grand strategy to take Taiwan

Stephens, foreign-affairs columnist of the Wall Street Journal, 2007

(Bret, “China’s Gift,” Wall Street Journal, p. 12, January 24, <http://www.uyghuramerican.org/articles/766/1/Chinas-Gift/index.html>, Accessed June 30, 2011, NS)

That didn't happen. Instead, China took the initiative, and for entirely logical reasons. "The test is consistent with China's publicized military strategy," says Yuan Tiecheng of Shanghai's Pacific Institute for International Strategy. "China must develop some sha shou jian -- critical battlefield weapons -- as deterrence to those forces [that support] Taiwan independence or oppose reunification." But why should ASATs, of all weapons, be China's sha shou jian of choice? The ASAT test, says Bernard Cole of the National War College, "is something they've been trying to do for a long time. If you look at their analysis of Western military strategy going back to Desert Storm, they saw that if they could deprive the U.S. of the ability to use space then they would really have a leg up." That's especially true given the U.S. military's increasing reliance on precision and networks over mass and concentration in combat situations -- reliance that is almost wholly dependent on space-based surveillance, positioning and communications satellites. Disable or destroy them, and U.S. military assets such as aircraft carrier battle groups become about as exposed and helpless as the Polish cavalry was circa September 1939. Thus the Chinese have been working toward an ASAT capability, while the West has been doing its best to set a good global example -- and speeding Chinese efforts along. As recently as the early 1990s, the Chinese had not even mastered the technicalities of large solid-fuel motor propulsion. This they acquired with the help of U.S. defense contractor Martin Marietta (now a part of Lockheed) during the Clinton years. The Chinese also mastered the arts of micro- and nano- satellites -- each with potential ASAT uses -- thanks to the assistance of Britain's Surrey Satellite Technology, Ltd. The Chinese also seem to have fielded ground-based laser systems similar to the one Congress tried to quash in 1985. Last September a report surfaced in Defense News that the Chinese had aimed the lasers at U.S. satellites.

ASATs Bad – Hegemony – Turns East Asian Allies

U.S. decline of credibility will inevitably lead losses in allies in Asia

Friedberg, professor of politics and international affairs at Princeton, 9/1/09

(Aaron L., professor of politics and international affairs at the Woodrow Wilson School at Princeton University, “Here Be Dragons: Menace”, *The National Interest*, September-October Issue, p.20, http://www.gwu.edu/~power/literature/dbase/friedberg4.pdf, accessed 7/8/11) EK

The system of alliances and diplomatic relationships that make up the U.S. strategic position in Asia is built on a foundation of military power. The credibility of America's security guarantees--and the willingness of others to accept them--is a direct result of its perceived strength and its reputation for resolve. If these erode, the superstructure of alliances and overseas bases on which the United States currently depends may persist for a time, but will not do so indefinitely. Whether the end comes gradually or in a sudden, catastrophic collapse will depend on chance and circumstance.

ASATs Bad – Causes ASAT Prolif

India has already expressed interest in developing its own ASAT technology, they’ll model after China

Hitchens, Director of World Security Institute’s Center for Defense, 2007

(Theresa, “U.S.-Sino Relations in Space: From ‘War of Words’ to Cold War in Space?” China Security, p. 13-14, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=186>, Accessed June 30, 2011, NS)

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

ASATs leads to Japan militarization

Hitchens, Director of World Security Institute’s Center for Defense, 2007

(Theresa, “U.S.-Sino Relations in Space: From ‘War of Words’ to Cold War in Space?” China Security, p. 13-14, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=186>, Accessed June 30, 2011, NS)

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

ASATs Bad – Space Debris – No Future Missions

Anti – satellite tech creates space debris that endangers space missions

Carreau, Space Writer, 4/6/11 (Mark – Former Space Reporter for the Houston Chronicle – is now a freelance writer, Aerospace Daily & Defense Report, Pg. 6 Vol. 238 No. 4, Lexis) AC

HOUSTON — The U.S., Russian and Italian crewmembers of the International Space Station came within an hour of taking shelter in their docked Soyuz TMA-20 «lifeboat» spacecraft on April 5 as debris from China’s January 2007 anti-satellite test passed within 3 mi. of the orbiting science laboratory. Commander Dmitry Kondratyev, flight engineer Catherine Coleman of NASA and Paolo Nespoli of the European Space Agency were notified of a potential collision threat by NASA’s Mission Control shortly after 7 a.m. EDT, too late to plot a debris-avoidance maneuver for the orbital outpost. Kondratyev’s crew was instructed to prepare to retreat to the Soyuz docked at the station’s Russian segment Rassvet module unless further tracking showed an improvement in the collision threat. The 6-in. debris fragment from China’s Fengyun 1C passed by the station at 4:21 p.m. EDT. Ninety min. ahead of the close pass, the flight control team informed Kondratyev that the most recent tracking showed the threat had diminished, and the sheltering would not be necessary. «Our ballistic folks are confident of this,» station communicator Bobby Satcher informed the fliers. «Good news,» Kondratyev responded. It was the station’s second debris warning within four days. Late April 1, U.S. and Russian flight control teams executed a reboost of the nearly 1-million-lb. orbital outpost to avoid debris liberated by the February 2009 collision between the Russian Cosmos 2251 spacecraft and U.S. commercial Iridium 33 satellite. China’s successful 2007 ASAT (anti-satellite) test, in which the eight-year-old Fengyun 1C polar-orbiting weather satellite was destroyed by a missile, unleashed an estimated 5,000 pieces of orbital debris, elevating the hazard to space station crews.

Coop Solves – ASATs (1/2)

**US cooperation will encourage China to cease ASAT development**

**Hitchens, World Security Institute Center for Defense Information director, 7**

(Theresa – Leads the CDI’s Space Security Project and serves on the editorial board of the Bulletin of atomic Scientists and is a member of Women in International Security and the International Institue for Strategic Studies, U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space, China Security Issue 5 pp. 18-19, <http://www.chinasecurity.us/pdfs/Issue5full.pdf>) AC

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

U.S. and China space co-operation will deter China from further ASAT operations

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. iv, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA539619, accessed 6/29/11) EK

On January 11, 2007, China successfully executed a direct-ascent anti-satellite (ASAT) test/demonstration by destroying one of its aging weather satellites. This event captured the attention of the world, especially the U.S. It is believed that China is pursuing a host of counterspace capabilities but the question remains as to why. There are many possible reasons for China’s pursuit of counterspace capabilities, with one of the more likely being a means to gain an advantage when facing a dominant conventional military force. Whatever China’s motivation is, it is important for the U.S. to take action to deter China from further ASAT operations that could possibly harm satellite systems on orbit. It is the intent of this research to propose the idea of U.S.-China space cooperation in order to deter the PRC from potentially harmful ASAT operations. This is especially important given the current lack of dialogue between these two nations with regard to space issues. The respective space policies of the U.S. and China show that each nation is open to space cooperation, and both currently engage in international space cooperative efforts. U.S.-China space cooperation can provide benefits to both nations and ultimately provide greater transparency and trust with regard to each nation’s space activities. Acquiring this transparency and trust through cooperation could be an ideal solution in deterring China from further harmful ASAT operations.

[NOTE: ASAT = anti-satellite weapon]

Coop Solves – ASATs (2/2)

**Cooperation and Dialogue will create a solution to the ASAT tension**

**Hitchens, World Security Institute Center for Defense Information director, 7**

(Theresa – Leads the CDI’s Space Security Project and serves on the editorial board of the Bulletin of atomic Scientists and is a member of Women in International Security and the International Institue for Strategic Studies, U.S.-Sino Relations in Space: From “War of Words” to Cold War in Space, China Security Issue 5 pp. 27, <http://www.chinasecurity.us/pdfs/Issue5full.pdf>) AC

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

\*\*\* Cooperation Advantage

China – Wants To Go To Space

China has many goals for space by 2016 – space station, satellites, vehicles

Acuthan, China Perspectives, 6

(Jayan Panthamakkada, China perspectives, “China’s Outer Space Porgramme: Diplomacy of Competition or Cooperation?,” January – February, <http://chinaperspectives.revues.org/577>, accessed: 7/6/11) KA

36 The short-term development targets (for the next decade) are briefly as follows:43

37 – To build up an Earth observation system for long-term stable operation. The meteorological satellites, resource satellites, oceanic satellites and disaster monitoring satellites can be developed into an Earth observation system for long-term stable operation to conduct stereoscopic observation and dynamic monitoring of the land, atmosphere, and oceanic environments of the country, the peripheral regions and even the whole globe; 38 To set up an independently operated satellite broadcasting and telecommunications system. Positive support will be given to the development of commercial broadcasting and telecommunications satellites such as geo-stationery telecom satellites and TV line broadcasting satellites with a long operating life, high reliability and large capacity, so as to form China’s satellite telecom industry; 39 To establish an independent satellite navigation and positioning system;

40 To upgrade the overall level and capacity of China’s launch vehicles;

41 To realise manned spaceflight and establish an initially complete R&D and testing system for

manned space projects;

42 To establish a co-ordinated and complete national satellite remote-sensing application system

by building various related ground applications systems through overall planning;

43 To develop space science and explore outer space by developing a scientific research and

technological experiment satellite group of the next generation.

China has many goals for space by 2026 – China wants to play an important role in the field of science

Acuthan, China Perspectives, 6

(Jayan Panthamakkada, China perspectives, “China’s Outer Space Porgramme: Diplomacy of Competition or Cooperation?,” January – February, <http://chinaperspectives.revues.org/577>, accessed: 7/6/11) KA

44 The long-term development targets (for the next twenty years or more) are briefly as follows:44 45 To achieve industrialisation and marketisation of space technology and space applications. The exploration and utilisation of space resources shall meet a wide range of demands of economic construction, state security, science and technology development and social progress, and contribute to increasing the comprehensive national strength;

46 To establish a multi-function and multi-orbit space infrastructure composed of various satellite systems and set up a satellite ground application system that harmonises spacecraft and ground equipment to form an integrated ground-space network system in full, constant and long-term operation in accordance with the overall planning of the state;

47 To establish China’s own manned spaceflight system and carry out manned spaceflight scientific research and technological experiments on a certain scale; and 48 To obtain a more important place in the world in the field of space science with more achievements and carry out explorations and studies of outer space.

China – Wants Coop With The US (1/2)

The Chinese government wants to cooperate with the US in human spaceflight

Selding, Space News Staff Writer, 11

(Peter B, Space News, “Chinese Government Official Urges U.S.-Chinese Space Cooperation,” 4-15, <http://www.spacenews.com/civil/110414-chinese-official-space-cooperation.html>, 7-1-11, GJV)

COLORADO SPRINGS, Colo. — A top Chinese government space official on April 14 appealed to the U.S. government to lift its decade-long ban on most forms of U.S.-Chinese space cooperation, saying both nations would benefit from closer government and commercial space interaction. He specifically called for cooperation on manned spaceflight, in which China has made massive investment in recent years. Lei Fanpei, vice president of China Aerospace Science and Technology Corp. (CASC), which oversees much of China’s launch vehicle and satellite manufacturing industry, said China purchased more than $1 billion in U.S.-built satellites in the 1990s before the de facto ban went into effect in 1999. Since then, the U.S. International Traffic in Arms Regulations (ITAR) have made it impossible to export most satellite components, or full satellites, to China for launch on China’s now successful line of Long March rockets. The ITAR regulations that tightened the U.S. technology export regime were put into place to punish China for its missile exports, and to slow development of China’s rocket industry by reducing its customer base. Most commercial telecommunications satellites carry at least some U.S. parts, which is why ITAR has all but locked China out of the global commercial launch market. The U.S. government is reviewing the current ITAR regime, which U.S. industry says has had the unintended effect of making it difficult to sell satellites and satellite components just about anywhere in the world. At the same time, China’s domestic demand for launches of its own telecommunications, navigation, Earth observation and science satellites — and its manned space program — has given the Long March vehicle sufficient business to earn it a record of reliability. The global insurance underwriting community now ranks the Long March vehicle alongside Russian and European rockets for reliability when it sets insurance premiums. Addressing the National Space Symposium here, Lei said Chinese vehicles launched more than 20 U.S.-built satellites in the 1990s. While cooperation with the United States has been shut down, he said, China has maintained relations with the 18-nation European Space Agency, Brazil, France, Russia and others. China also has developed a telecommunications satellite product line that has been bundled with a Chinese Long March vehicle to offer in-orbit delivery of telecommunications spacecraft to a half-dozen nations that in many cases can offer China access to their crude oil reserves. Lei said he sees three areas in which U.S.-Chinese cooperation would be in both nations’ interests. The first, he said, is an open commercial access of each nation to the other’s capabilities in satellites and launch vehicles. The second, he said, is manned spaceflight and space science, particularly in deep space exploration. The third is in satellite applications including disaster monitoring and management.

China – Wants Coop With The US (2/2)

China wants to cooperate with the US in space

Martina, Reuters correspondent on Chinese international affairs, 11

(Michael, Reuters, “China astronaut calls for U.S. cooperation”, 4/29/11, <http://www.reuters.com/article/2011/04/29/us-china-space-idUSTRE73S4BS20110429>, accessed 7/1/11, CW)

(Reuters) - China's most renowned astronaut said on Friday his country and the United States should make good on their presidents' promises to cooperate in space. "I think the two countries should proactively implement the intent expressed in the joint communique to eliminate obstacles and promote exchange and cooperation in our space programs," Yang Liwei, now the vice director of the country's Manned Space Engineering Office, said. Efforts at U.S.-China cooperation in space have failed in the past decade, stymied by economic, diplomatic and security tensions, despite a 2009 attempt by President Barack Obama and his Chinese counterpart, Hu Jintao, to launch collaboration3. Obama and Hu, in a statement in November 2009, called for "the initiation of a joint dialogue on human spaceflight and space exploration, based on the principles of transparency, reciprocity and mutual benefit." U.S. fears over national defense and inadvertent technology transfer have proven to be major roadblocks, particularly after Beijing carried out an anti-satellite test in January 2007, using a ground-based missile to destroy one of its inactive weather satellites. Yang, considered a hero of China's ambitious space program and the first from his country to enter space, made the statement during a carefully controlled media visit to China's astronaut training facility in the western suburbs of Beijing. There, journalists were ushered through an echoing hall housing three new space flight training simulators, none in use by China's 24 astronauts. But China is pushing forward without the United States, its funding in the face of NASA scale-backs and its cooperative efforts with Russia and other countries possibly constituting the next best hope for the future of space exploration.

China wants cooperation over a joint mission to space with the US – there are three reasons why it would be in both nations’ best interests

Kennedy, Governor of the board of directors of the Virginia Commercial Space Flight Authority and to member of the Virginia Aerospace Advisory Council, 11 (Jack, SpacePorts, “China Seeks US Policy Cooperation, 4/15/11, <http://spaceports.blogspot.com/2011/04/china-seeks-us-space-cooperation.html>, accessed 7/1/11, CW)

A top Chinese government space official on April 14 appealed to the U.S. government to lift its decade-long ban on most forms of U.S.-Chinese space cooperation, saying both nations would benefit from closer government and commercial space interaction. Lei Fanpei, vice president of China Aerospace Science and Technology Corp. (CASC), which oversees much of China’s launch vehicle and satellite manufacturing industry, specifically called for cooperation on manned space flight, in which China has made massive investment in recent years, reports Peter B. de Sekling of Space News. While cooperation with the United States has been shut down, he said, China has maintained relations with the 18-nation European Space Agency, Brazil, France, Russia and others. Lei said he sees three areas in which U.S.-Chinese cooperation would be in both nations’ interests. The first, he said, is an open commercial access of each nation to the other’s capabilities in satellites and launch vehicles. The second, he said, is manned spaceflight and space science, particularly in deep space exploration. The third is in satellite applications including disaster monitoring and management.

US – Wants Coop (1/2)

The US wants and sees the benefits to working with China

Steinberg, Deputy Secretary of State, 10

(James B., American academic and political advisor, U.S. Department of State, 4-11-10, “U.S. - China Cooperation on Global Issues”, <http://www.state.gov/s/d/2010/141772.htm>, MLF, accessed 7-1-11)

I think it’s important to begin this discussion of our collaboration on global issues by reiterating the basic approach and sort of precepts under which President Obama has led our engagement with China. And as he said, we welcome a China that is strong, prosperous, and a successful member of the international community. Now is the time for our two great nations to join hands and commit to creating a prosperous future for our children. It’s a commitment, a very forward-looking and very positive commitment, which reflects the fact that we need to understand our bilateral relationship in a broader context. This really goes to a point that Secretary Clinton made in a speech she gave to the Council on Foreign Relations last year, which is that given the nature of these challenges we face and the changed global agenda, we face a world in which the central problem of our time is how to generate effective collective action to deal with the problems that no country on its own, no matter how powerful, can solve. And I think this is an insight that both the United States and China share at the core of our effort to deal with these global problems.

Obama wants coop with China

Richburg, Washington Post Writer, 11

(Keith B, The Washington Post, “Mistrust stalls U.S.-China space cooperation,” 1-22, <http://www.washingtonpost.com/wp-dyn/content/article/2011/01/21/AR2011012104480.html>, 7-1-11, GJV)

The Obama administration views space as ripe territory for cooperation with China. Defense Secretary Robert M. Gates has called it one of four potential areas of "strategic dialogue," along with cybersecurity, missile defense and nuclear weapons. And President Obama and Chinese President Hu Jintao vowed after their White House summit last week to "deepen dialogue and exchanges" in the field. But as China ramps up its space initiatives, the diplomatic talk of cooperation has so far found little traction. The Chinese leadership has shown scant interest in opening up the most sensitive details of its program, much of which is controlled by the People's Liberation Army (PLA). At the same time, Chinese scientists and space officials say that Washington's wariness of China's intentions in space, as well as U.S. bans on some high-technology exports, makes cooperation problematic. For now, the U.S.-China relationship in space appears to mirror the one on Earth - a still-dominant but fading superpower facing a new and ambitious rival, with suspicion on both sides.

US – Wants Coop (2/2)

NASA Administrator Bolden pushing coop with China on space

China Daily ’10

(“NASA sees hope for a Chinese partner,” 27 October 2010, LexisNexis, 7.1.11, SWolff)

BEIJING - NASA chief Charles Bolden said his China visit laid the groundwork for future cooperation between the two countries on manned space flight and space exploration. The head of the United States National Aeronautics and Space Administration, a former astronaut and veteran of four space shuttle missions, wrapped up a five-day trip to China on Thursday that included a tour of a major space launch center. Bolden said in a statement released on Tuesday by the US embassy in Beijing that he had been given a "very comprehensive visit" of facilities linked to China's manned space flight program and held talks with senior officials. He said the visit had helped the two sides "reach a common understanding of the importance of transparency, reciprocity and mutual benefit as the underlying principles of any future interaction" in the area of space flight. While no specific proposals for cooperation were discussed, Bolden said his trip could "form the basis for further dialogue and cooperation in a manner that is consistent with the national interests of both of our countries". "I am pleased that NASA was able to meet its objectives for the visit," Bolden said. The two sides had said during US President Barack Obama's visit to China in November 2009 that they looked forward to "expanding discussions on space science cooperation" and organizing reciprocal visits by their space chiefs. Bolden's visit came two weeks after China launched its second lunar probe - the next step in its ambitious program to become the second country to put a man on the moon. The Americans have achieved the only manned lunar missions, making six trips from 1969 to 1972.

Obama’s new space policy includes working on multilateral projects with several countries

Klotz, Journalist specializing in NASA space science and commercial space, 2010

(Irene, “U.S. Opens Space Doors To China,” Discovery News, <http://news.discovery.com/space/nasa-space-china.html>, June 30, accessed July 8, 2011, NS)

The next time the United States decides to venture into space, it won't be going alone. Future missions beyond Earth will include Russian, European, Japanese, Canadian and possibly Chinese partners, under a new national space policy unveiled by the Obama administration this week.

The ventures will start with projects to build confidence, gain trust and find common ground, such as cleaning up orbital debris, sharing climate information about the planet and collaborating on science missions. The International Space Station could even be tapped for trial runs, though obstacles remain.

Now Key – General (1/2)

Now is key to solve space relations to avoid war escalation

MacDonald, White House Office of Science and Technology Policy, former assistant director for national security, 8

(Bruce W., former assistant director for national security at the White House Office of Science and Technology Policy, “China, Space Weapons, and U.S. Security”, Council Special Report, No. 38, September 2008, p.3, <http://books.google.com/books?id=o0GkabrNftIC&printsec=frontcover&dq=us+china+space&hl=en&ei=XSsOTv6QIs_TiALWtdSuBw&sa=X&oi=book_result&ct=result&resnum=1&ved=0CCoQ6AEwAA#v=onepage&q&f=false>, accessed 7/1/11) EK

Having crossed a space Rubicon with their ASAT demonstrations, neither nation can un-invent these capabilities. As the United States approaches major security policy reviews with the advent of a new administration in early 2009, both it and China face fundamental choices about the deployment and use of such capabilities, and the development of more advanced space weapons. The United States and China stand at a crossroads on weapons and space: whether to control this potential competition, and if so, how. While the United States is likely well ahead of China in offensive space capability, China currently is much less dependent on space assets that the U.S. military, and thus in the near term has less to lost from space conflict it is became inevitable. China’s far smaller space dependence, which hinders its military potential, ironically appears to give it a potential relative near-term offensive advantage: China has the ability to attack more U.S. space assets than vice versa, as asymmetry that complicates the issue of space deterrence, discussed later. This asymmetric Chinese advantage will likely diminish as China grows increasingly dependent on space over the next twenty years, and as the United States addresses this space vulnerability. Thus, the time will come when the United States will be able to inflict militarily more meaningful damage on Chinese space-based assets, establishing a more symmetric deterrence potential in space. Before then, other asymmetric means are available to the United States to deter China, though at possibly greater escalatory risk. That is, the United States could threaten to attack not just Chinese space assets, but also ground-based assets, including ASAT command-and-control centers and other military capabilities. But such actions, which would involve attacking Chinese soil and likely causing substantial direct casualties, would politically weigh much heavier that the U.S. loss of space hardware, and thus might climb the escalatory ladder to a more damaging war both sides would probably want to avoid.

Now is key for U.S. space policy reform

MacDonald, former assistant director for national security, 2008

(Bruce W., former assistant director for national security at the White House Office of Science and Technology Policy, “China, Space Weapons, and U.S. Security”, Council Special Report, No. 38, September 2008, p.33, <http://books.google.com/books?id=o0GkabrNftIC&printsec=frontcover&dq=us+china+space&hl=en&ei=XSsOTv6QIs_TiALWtdSuBw&sa=X&oi=book_result&ct=result&resnum=1&ved=0CCoQ6AEwAA#v=onepage&q&f=false>, accessed 7/1/11) EK

The United States faces a serious challenge as its military and economic prowess increasingly depend upon space infrastructure that grows more vulnerable as worldwide space technology advances, especially in China, While the United States will likely remain the preeminent space power at least for the next twenty to thirty years, it will no longer enjoy the level of near monopoly on military space capability that it has enjoyed since the fall of the Soviet Union. As China becomes credible space power with demonstrated offensive counterspace capability, the question for U.S. policy is what kind of feasible and stable space regime best serves U.S. long-term security interests. This question should be addressed early in the new administration’s tenure, if not earlier.

**Now Key – General (2/2)**

Coop with China essential – now key

MacDonald, United States Institute of Peace, 5/11/11

[Bruce W., United States Institute of Peace, USIP.org, “Testimony before the U.S.-China Economic and Security Review Commission onThe Implications of China’s Military and Civil SpacePrograms” 5/11/11 <http://www.usip.org/files/resources/bmacdonald_testimony.pdf> , accessed 7/1/11, HK]

Most often, the use of OCS would be too costly to U.S. security interests, although some scenarios, such as the threat to U.S. aircraft carriers from ballistic missiles, would completely change this calculus. This entire area requires further study, tabletop exercises not just of space war games, but also “crisis games,” where more attention can be paid to crisis behavior in space, to understand whether certain actions are stabilizing or destabilizing.While the Obama space policy, as did the Bush space policy before it, recognizes that space is a vital U.S. National interest, it seems to overlook the implications of this important reality. In this context, offensive space capabilities cannot be considered just one more weapon in the U.S. arsenal, to be used when tactical circumstances beckon to field commanders. When vital national interests are at stake, great caution must be exercised. As a general rule, where threats to vital national interests are involved, a doctrine of deterrence should be developed and embraced as U.S. policy. We would credibly threaten to use such a capability but not actually seek to do so unless the stakes were extraordinarily high. To do otherwise against a near-peer space power adversary such as China would put our vital national interests at risk. Recommendations The United States should: Put greater effort and resources into understanding the PLA’s space program and larger Chinese military intentions in space. Put more emphasis on understanding how space deterrence works, especially through simulation efforts that specifically target the crisis situation itself, in addition to conflict simulations. Continue seeking to engage China on key space stability issues and ensure that others understand why U.S. and Western diplomatic initiatives and the approach they embody are superior to the Chinese Russian PPWT. Enhance U.S. space situational awareness and space intelligence capabilities Diversify how we provide space information and services to the war fighter and senior national security leaders to reduce dependence on any single link.

China is pursuing an aggressive space policy now, cooperation is key to prevent future attacks

Hays, retired Airforce Lieutenant Colonel, 2009

(Peter L., senior policy analyst supporting the plans and programs division of the National Security Space Office “Space and Sino-American Security Relations” <http://web.mac.com/rharrison5/Eisenhower_Center_for_Space_and_Defense_Studies/Journal_Vol_2_No_3_files/Space%20and%20Defense%202_3.pdf> SPACE and DEFENSE Volume Two Number Three Winter 2009 accessed: 6/28/11 pg 18) TJL

China’s emphasis on space exploration and its development and use of space capabilities are prominent and tangible expressions of its emergence as a great power and make space an increasingly important dimension of Sino- American relations. In October 2003 China independently launched and recovered its first taikonaut, becoming just the third member of an elite spacefaring club with Russia and the United States. Then in January 2007 China first successfully tested a kinetic energy antisatellite (ASAT) weapon and again joined Russia and the United States as one of only three states known to have demonstrated this capability. China’s growing power and space emphasis may become manifest in mostly peaceful and cooperative ways or may lead to increasing competition and perhaps even conflict with the United States.

**Space Key To Cooperation (1/3)**

Space is a key to relations but unlikely to help

Richburg, Washington Post, 11

(Keith B. 1-22-11, Washington Post: “Mistrust stalls U.S.-China space cooperation”, <http://www.washingtonpost.com/wp-dyn/content/article/2011/01/21/AR2011012104480.html>, MLF, accessed 7-1-11)

BEIJING - China's grand ambitions extend literally to the moon, with the country now embarked on a multi-pronged program to establish its own global navigational system, launch a space laboratory and put a Chinese astronaut on the moon within the next decade. The Obama administration views space as ripe territory for cooperation with China. Defense Secretary Robert M. Gates has called it one of four potential areas of "strategic dialogue," along with cybersecurity, missile defense and nuclear weapons. And President Obama and Chinese President Hu Jintao vowed after their White House summit last week to "deepen dialogue and exchanges" in the field. But as China ramps up its space initiatives, the diplomatic talk of cooperation has so far found little traction. The Chinese leadership has shown scant interest in opening up the most sensitive details of its program, much of which is controlled by the People's Liberation Army (PLA). At the same time, Chinese scientists and space officials say that Washington's wariness of China's intentions in space, as well as U.S. bans on some high-technology exports, makes cooperation problematic. For now, the U.S.-China relationship in space appears to mirror the one on Earth - a still-dominant but fading superpower facing a new and ambitious rival, with suspicion on both sides. "What you have are two major powers, both of whom use space for military, civilian and commercial purposes," said Dean Cheng, a researcher with the Washington-based Heritage Foundation and an expert on the Chinese military and space program. NASA's human spaceflight program has been in flux in recent years, fueling particular concern among some U.S. observers about the challenge posed by China's initiatives in that area. There is "a lot of very wary, careful, mutual watching," Cheng said. Song Xiaojun, a military expert and commentator on China's CCTV, said that substantial cooperation in the space field is impossible without mutual trust. Achieving that, he said, "depends on whether the U.S. can put away its pride and treat China as a partner to cooperate on equal terms. But I don't see that happening in the near future, since the U.S. is experiencing menopause while China is going through puberty." But while China may still be an adolescent in terms of space exploration - launching its first astronaut in 2003 - it has made some notable strides in recent months and years, and plans seem on track for some major breakthroughs. On the day Hu left for his U.S. trip, Chinese news media reported the inauguration of a new program to train astronauts - called taikonauts here - for eventual deployment to the first Chinese space station, planned for 2015. As part of the project, two launches are planned for this year, that of an unmanned space module, called Tiangong-1, or "Heavenly Palace," by summer, and later an unmanned Shenzhou spacecraft that will attempt to dock with it. On a separate track, China is also working through a three-stage process for carrying out its first manned moon landing. The first stage was completed in October with the successful launch of a Chang'e-2 lunar orbiter. In 2012 or 2013, an unmanned landing craft is scheduled to take a rover to the moon to collect rock and soil samples. By 2020, according to the plan, a taikonaut could land on the moon. Yet a third track is devoted to the development of a Chinese global navigational system, called Beidou, or "Compass," to challenge the current supremacy of the American global positioning system, or GPS. Beidou is scheduled to provide satellite navigation services to the Asia-Pacific region next year and to be fully global by 2020. Chinese academics involved in the space program said Beidou is crucial for China's military. Without its own navigational system, Chinese troops and naval vessels must rely almost exclusively on the American GPS system, which could be manipulated or blocked in case of a conflict. The new system "can cover the civilian and military sides," said Xu Shijie, a professor of astronautics at Beihang University in Beijing. "For the military side, it's more urgent." Xu, who heads a space research team, acknowledged that

**[CARD CONTINUES]**

**Space Key To Cooperation (2/3)**

**[CARD CONTINUES]**

even some Chinese might question the government's decision to fund a costly space program at a time when there are other pressing concerns, such as developing the country's western provinces to bring living standards and incomes there into line with those in the more prosperous east. But he called the space program "a long-term investment," with the potential for beneficial spillover effects on the civilian economy. "The government is concerned with social welfare issues," Xu said. "But a scientist is also trying to look 20 years down the road." There is also the matter of prestige. As with other grandiose projects - high-

speed rail, the world's biggest airport in Beijing, staging the 2008 Olympics - China's Communist leaders view the space program as a way to show citizens that they can produce successes, thus fostering patriotism and support for the party's continued rule. "National pride will increase," Xu said. "It's a selling point used by leading scientists." As part of the effort to expand public awareness of and excitement about the space program, the government broke ground in December for a 3,000-acre space-launch center and theme park on the southern island of Hainan, modeled after the Kennedy Space Center in Florida. When the center opens in 2014, the public will be able to watch rocket launches there from an elevated platform. The adjacent Hainan Space Park, meanwhile, will be divided into four sections, replicating the moon, the sun, Mars and Earth. "We want to combine tourism with education," said Liu Xianbo, an official with China Aerospace International Holdings, which is building the theme park. Hainan offers several advantages as a launch site, compared with China's existing, secrecy-cloaked sites in sparsely populated areas of Shanxi province, Sichuan and the Gobi Desert. It is already a major tourist destination. Its southern location, closer to the equator, maximizes the effects of Earth's rotation, boosting rocket thrust. And in the event of a mishap, launches over water, rather than land, would make rescues easier. Hainan also has another advantage: Parts of the island are already zoned for military use under the PLA's control. China's space program has a civilian component, under the China National Space Administration, but it is run primarily by the military. That could make enhanced cooperation with the United States difficult - and not just from the Chinese side. Last fall, when NASA administrator Charles F. Bolden Jr. visited China to explore areas where the two countries could cooperate in space, two senior Republican members of Congress - Reps. Frank R. Wolf (Va.) and John Abney Culberson (Tex.) - wrote to Bolden beforehand to protest, saying they had "serious concerns about the nature and goals of China's space program" and warning that "China's intentions for its space program are questionable at best." Since Republicans won control of the House in November's elections, Wolf now chairs the House Appropriations Committee's commerce, justice and science subcommittee, which oversees NASA's budget, and Culberson is a senior subcommittee member.

**Space Key To Cooperation (3/3)**

**The US and China should cooperate in space—there is too much competition right now**

**Jinnette, Lieutenant Colonel, 9**

(James G., Strategy Research Project, “US China Policy: Time for Robust Engagement”, p. 18-19, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA497538) PG

**Space is another critical shared arena of potential interest-based engagement which must be addressed immediately because of its perceived strategic importance to both China and the US. As America sees its preeminence in space erode with ever-increasing Chinese efforts to dominate space in its own way**, China recognizes that space offers it an asymmetric advantage which may help it counter the US during any eventual conflict. Because China depends on access to resources from sea lanes, its primary geopolitical dilemma is maritime power. Quite simply, China views the US Navy as its primary threat. But China well knows how much America’s Navy utilizes space assets to perform its mission, and sees unique opportunities in space to counter the threat to its economic stability.46 As George Friedman observes, “from the Chinese point of view, the denial of space to the United States would undermine American denial of the seas to China.”47 For this reason, **China has accelerated its efforts in space; it has destroyed a satellite, conducted a manned spacewalk, and has plans to send an unmanned rover to the surface of the Moon with manned mission to follow years later.** 48 Reacting to these developments, experts within the Obama team have considered removing some barriers which exist between NASA and the US Military’s space program to find economies and accelerate NASA’s manned space flight timetable.49 On both sides of the Pacific, space is viewed as a key strategic arena, and **both China and the US are taking aggressive steps to gain and or maintain dominance of space to protect their individual national interests.** Faced with these developments, **avoidance of a cold-war style standoff in space may become impossible unless US policy makers immediately undertake assertive efforts to find an interest-based approach towards cooperative engagement with China in the space arena.** **If the United States misses the opportunity to cooperate with China in a growing international space competition, it could suffer an erosion of its leadership over the long term.50**

Coop Good – Spill Over To Other Areas (1/3)

US-Sino joint development key to broader coop

Crienglish.com, 11/15/00

[Crienglish.com,“Sino-US Trade and Economic Relations and Technological Cooperation”11/15/00[http://english.cri.cn/811/2006/04/14/199@77695.htm](http://english.cri.cn/811/2006/04/14/199%4077695.htm), accessed 6/31/11, HK]

Thanks to the efforts by the two governments and business communities, great achievements have been made in China-U.S. economic and trade cooperation in recent years. From late October to early November 1997, President Jiang Zemin paid a successful state visit to the U.S., giving a strong impetus to the development of an all-round bilateral relationship, including a sound trade and economic relationship. In June 1998, during President Bill Clinton's state visit to China, China and the U.S. had a broad and in-depth discussion on a wide range of issues, and signed the Agreement on Peaceful Nuclear Cooperation. In May 1998, the 11th Session of the China-U.S Joint Economic Committee was held in Washington, D.C. At the meeting, both sides had a thorough discussion on international and domestic issues of common interest.) In December 1998, the 12th Session of the China -U.S. Joint Committee on Commerce and Trade was held in Washington, D.C. The two sides exchanged views on a wide range of issues of common interest and reached a series of agreements on trade and economic cooperation in various areas. In March 1999, U.S. Secretary of Commerce Dally led a trans-sectoral infrastructure mission to Beijing, and signed with the Chinese side several agreements and memoranda. From April 6 to 14, 1999, Premier Zhu Rongji paid an official visit to the U.S. Premier Zhu and President Clinton released a joint statement on China's accession to the WTO. Premier Zhu and Vice President Gore jointly chaired the Second Session of the China-U.S. Forum on Environment and Development. The two sides also signed a series of protocols and letters of intention in the areas of agriculture, civil aviation, customs, energy, environment, etc. On March 7, 2000, the 13th Session of the China-U.S. Joint Committee on Commerce and Trade was held in Beijing. Chinese Minister of Foreign Trade and Economic Cooperation Shi Guangsheng and U.S. Secretary of Commerce William Dally co-chaired the meeting. The two sides exchanged views on such issues of common interest as China's Permanent Normal Trade Relations (PNTR) with the U.S., China's accession to the WTO, trade and investment, sector cooperation, commerce law, etc. The two sides issued a joint statement at the conclusion of the meeting. President Jiang Zemin and Premier Zhu Rongji met with the U.S. delegation. On October 27, 2000, the 13th Session of the China-U.S Joint Economic Committee was held in Washington, D.C. Chinese Minister of Finance Xiang Huaicheng and U.S. Secretary of Treasury Lawrence Summers co-chaired the meeting. The two sides had a discussion on various issues, such as macro economy & banking, enforcement of international law, economic structure reform, regional economic development, among other matters.

Coop Good – Spill Over To Other Areas (2/3)

Space coop spills over

Beringer, Chief Executive Officer of the Berigner Group, No Date

[Daniel, Chief Executive Officer of the Berigner Group, TED, “Does space exploration encourage international cooperation?”No Date. <http://www.ted.com/conversations/748/does_space_exploration_encoura.html>, accessed 6/31/11, HK]

Pardon the brevity of this, I will happily answer any questions you may have. Space exploration encourages international cooperation for several reasons: As a branch of science and technology, space exploration is subject to some of the same trends. Scientists do not care so much about what country a scientist is from as they do about their scientific achievements. Look at the LHC; it's like the ISS of particle physics. Science dismisses national identity in favor of intellectual accomplishment. Space exploration is inherently scientific; space exploration dismisses national identity in favor of intellectual accomplishment. Honesty is required for effective cooperation between nations. You can't mess with the truth with rockets. They explode if you do. You can't fudge the numbers on orbital mechanics. You can't exaggerate your products capabilities; the difference between statement and reality will soon be obvious. Space requires honesty : international cooperation requires honesty. Space aides international cooperation by enforcing honesty.Space requires a level of competence bordering on perfection. You can't make many mistakes with a $20 million dollar satellite, much less with people lives. Having an international pool of talent to draw upon will reduce the chance of deadly mistake. Seeing the Earth as a brilliant blue crescent slowly spinning against the backdrop of diamond stars strewn across the depths of space can't help but to challenge ones national affiliations. You would begin to see yourself as a citizen of Earth. I haven't heard any astronaut say otherwise, and they'd be the best to know. Space exploration encourages international cooperation by way of an inherent honesty to the enterprise, a need for the best in the world, large scale projects like the ISS, and the visceral experience of seeing the Earth from space, bolstered by the shared international qualities of science.

Co-operation solves for better relations and transparency

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. 15, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA539619, accessed 6/29/11) EK

The first benefit of cooperation would be improved transparency.82 Secrecy of China’s space program has led to a suspicious outlook by many critics of this program. Space cooperation between the two countries could be based on regular meetings which “could help the two nations understand each other’s intentions more clearly.”83 With China as a partner, the U.S. would have better visibility and communication with the CNSA concerning China’s space activities, and the same would hold true for China. Reviewing China’s White Paper on its space policy and trying to make sense of its counterspace capabilities after the fact is the wrong approach. “If NASA signed an agreement with CNSA and began joint space projects, they would more easily and directly understand China’s space activities and directions.”84

Coop Good – Spill Over To Other Areas (3/3)

The US faces a direct space competition with China in the status quo – plan is key to ensure cooperation not only in space but on earth

Hitchens and Chen 8

(Theresa, Center for Defense Information, World Security Institute and David, CENTRA Technology, Inc, “Forging a Sino-US ‘‘grand bargain’’ in space” Space Policy 24 (2008) pg. 128–131, Available Online at Sciencedirect.com, Accessed June 28, 2011, EJONES)

In Washington’s space security community the debate has coalesced around the question of whether the future of Sino-US relations in space should more closely resemble arms control or an arms race—illustrated by the intercepts and destruction of satellites by both nations a year apart. Whatever direction Washington and Beijing take in their nascent military space competition is certain to be followed by other major and emerging space powers. Unfortunately, the existing trend in both nations is for promoting an offensive space strategy aimed primarily at one another. With a new US administration, whichever candidate enters office will face the challenge of finding viable alternatives to the anti-satellite arms race that lies at the end of the present course, an outcome that would be in neither party’s interest. The incoming president might avoid such a security dilemma with China by utilizing the full range of US soft power, backed by realistic hard power consequences. This will require the incoming administration to expand its understanding of what constitutes a space issue, and to develop a deeper knowledge of what motivates China’s leadership. Using both persuasion and dissuasion to craft a kind of ‘‘grand bargain’’ with China regarding space, the next president may be able to steer Sino-US competition toward trade, economics and sport, rather than military oneupmanship. Accomplishing this would strengthen US national security and international stability in the Pacific region.

Coop Good – AT – China Is A Bad Partner (1/2)

China is a good partner in space projects – other countries are cooperating with China now in space projects

Denny, retired US Naval Officer, Master in Science and Space Studies, 8

(Bart L., retired U.S. Naval Officer, continue my interest in the national security arena, Associate's Degree in Nuclear Technology, a Bachelor's Degree in Economics and Political Science, finished a Master of Arts in National Security Studies. , “international cooperation in human spaceflight: lessons learned from Russian participation in the international space station project,” bartdenny.com, <http://www.bartdenny.com/iss-lessons-learned.html>) KA

While the U.S. has distanced itself from China in space activities, other countries are growing closer, including Russia, several in Europe, Brazil, and a number in the Asia-Pacific region. There exists a wide range of cooperation in space between Russia and China. In the period of 2004 to 2006, 29 new cooperation projects have been initiated. China and Russia will launch a joint deep space exploration program in 2007 and join forces to explore the Sun and Mars.9 Deep space exploration is not China’s strength and cooperation with Russia will help China to speed the development of relevant technologies in this field. With regard to the European Union, China was the first non-EU member state to take part in the Galileo project and has agreed to contribute 200 million euros. Throughout the first phase, it will invest 70 million euros in research. In addition, space cooperation projects between China and Europe include the “Double Star Program” and the “Dragon Program” between the European Space Agency and China’s National Remote Sensing Center. The “Double Star Program”10 has already achieved initial results, while the “Dragon Program”11 has played an active role in flood control and relief work in China. Drawing upon the high definition pictures provided by the satellite, the Chinese government is capable of making rapid disaster evaluation and initiating quick response. Sino-European cooperation continue to expand and on Nov. 28, 2005, the China National Space Administration and the European Space Agency signed a space cooperation agreement, covering areas such as space science, Earth observation, communications, navigation and microgravity research. The Earth resources satellite cooperation between China and Brazil can well be heralded as a model of mutually beneficial cooperation. It not only improves China’s satellite R&D ability but also allows Brazil to acquire independent remote sensing imaging through launching CBERS-2.12 Brazil no longer needs to rely on U.S. Earth resources satellites to provide ground pictures. China and Brazil have also explored the possibility of jointly researching and developing weather and communications satellites, signing a cooperative agreement in 2003. China has had success in multi-national cooperation in Asia as well. It has promoted the establishment of the Asia-Pacific Space Cooperation Organization. Headquartered in Beijing, APSCO is an organization that aims to foster multilateral cooperation in the application of space technology amongst its members which include Bangladesh, China, Indonesia, Iran, Mongolia, Pakistan, Peru, Thailand, Argentina, Malaysia, Russia and Ukraine. China is a strong partner as its reliable and low cost space hardware and services offer an attractive option for these countries. China has fairly mature space launch capabilities and a burgeoning satellite industry. Cooperating with China allows partner countries to reduce their burden and lower risks. At the same time, it allows them to skirt U.S. regulatory obstacles. With the exception of the United States, no country classifies commercial satellites as munitions. Furthermore, only the U.S. views foreign satellites that contain American made components as its own product and therefore subject to stringent U.S. export controls. Many of the countries partnering with China are fed up with the U.S. practice of imposing its own standards on others.

Coop Good – AT – China Is A Bad Partner (2/2)

China cooperates with many other countries and agencies in space projects

Acuthan, China Perspectives, 6

(Jayan Panthamakkada, China perspectives, “China’s Outer Space Porgramme: Diplomacy of Competition or Cooperation?,” January – February, <http://chinaperspectives.revues.org/577>, accessed: 7/6/11) KA

57 The primary aim of China’s space activities is to meet the growing demands of economic construction, national security, science and technology development, social progress, to protect China’s national interests and build up a comprehensive national strength. In a country like China, anything linked to the military will encourage more political support than something with no military application. China has an extensive and well-developed programme for the exploitation of space. This has so far focused almost exclusively on developing space capabilities for “national social-economic objectives”. During the last two decades or more, China has joined bilateral, regional, multilateral and international space co-operation in different forms, such as commercial launching service, which have yielded extensive achievements. The issue of space debris is a big challenge to further expansion of space activities. The relevant departments of China pay great attention to the problem, and have carried out research on this issue with related countries since the beginning of the 1980s. In addition, China has participated in multilateral co-operative projects, such as the Committee on Earth Observation Satellites, World Weather Monitoring, UN Decade of Disaster Mitigation, and International Solar Terrestrial Physics.

Coop Good – Laundry List (1/2)

**Cooperation can be beneficial for the US too. Cooperation can solve political tensions, information about china, scientific research, space risks, Budgeting problems, and Trade**

**Zhou, Center for Space and applied Sciences, 8**

(Yi – Chinese Academy of the Sciences and Professor at George Washington University, Perspectives on Sino-US cooperation in civil space programs, Science Direct, Space Policy 24 (2008) 132-139) AC

On the other hand, some commentators in the USA worry that cooperation with China will somehow compromise US economic and political progress and even US national security [7]. However, there are several potential benefits for the USA which should be given greater consideration: \_ Benefits for geopolitical issues and global stability. A country’s strategic interests may provide the primary motivation for engaging partner nations in cooperative space ventures. The International Space Station (ISS) is a good example of this. China and the USA are both important countries and a stable relationship between them is a key factor in global stability. Space could be a focal point for promoting this kind of stability. Several European countries and Russia have undertaken cooperative activities in space with China to satisfy their ARTICLE IN PRESS geopolitical demands and other interests. Chinese participation in US-led space exploration would send a strong signal to the world of good US–China relations [8], which would be good for US international relations and would provide geopolitical benefits. \_ The United States will be able to understand more about China’s space development and direction through actual cooperation. At the moment the USA observes China’s space policy and capabilities through statements in China’s white papers. But studying one paper every five years is too limited and does not provide sufficient detail. Some American consulting and research institutions may simply rely on graduate students’ superficial papers to try to gain insight into the direction of China’s space development. These are not full-scale or always entirely accurate, and may sometimes result in misunderstandings. If NASA signed an agreement with CNSA and began joint space projects, they would more easily and directly understand China’s space activities and directions. They may even be able to make some good suggestions for China’s space projects and policies. These win–win suggestions should be readily adopted by China’s policy makers to extend the two countries’ space and national benefits. \_ Extending US opportunities for scientific discovery. Scientists in the USA have many interesting ideas and proposals for space science and space exploration, but the US space budget, though huge compared with that of other countries, is still limited. If the USA were to cooperate with China in space science and space exploration, there would be more opportunities for US scientific discovery. For example, in the China–ESA cooperative Double Star Exploration Program, China supplied the launch service and satellite. ESA supplied the back-up scientific instruments of the Cluster mission on the satellites. This helped ESA obtain more scientific data for research through the added payload. Greater research results were achieved. ESA’s instruments were valued at h800 000, which alone certainly cannot support a major new European science mission. \_ More choices and back-up for the USA. Space exploration is an inherently risky activity in which the element of risk can be managed and mitigated but never eliminated. It is necessary for any country to spread and manage risk. More back-up means greater safety. International cooperation can be used to duplicate capabilities which ensure that failure in one area is unlikely to jeopardize the entire mission or project. The most obvious example of this point today is the ISS’s reliance on the Space Shuttle and the Soyuz for transporting humans to the station. In the next 20 years the USA and China will be realizing ambitions to fly to the Moon. By cooperating with China, this additional back-up would lower the risks involved in human spaceflight. For example, if Americans return to the Moon and meet with an accident, the Chinese lunar project or crew could supply assistance as a back-up. Usually, such arrangements are discussed and integrated from the very beginning, in the design phase. Unfortunately that does not seem very likely under current circumstances. \_ Savings on the cost of US space projects to free up funds for more missions. Space science and space exploration activities are all extremely expensive, whether human or robotic. It is sometimes a waste of money and resources for different countries to explore the same unknown with the same scientific goals. Humans around the world should definitely share in pursuing these missions. <CONTINUED>

Coop Good – Laundry List (2/2)

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In contrast, duplicated efforts will result in negative byproducts, such as more space debris and an increased perception of a space race. China’s space launch and satellite ability has advanced greatly. Its space budget is also very stable, although total funding is not very high. It is believed that China’s civil space budget will grow continually over the next 15 years. If the USA can supply some instruments to or engage in joint research with China, it will be able to save significantly on mission costs associated with instrument development and launch. The USA would thus have more money for other worthwhile projects which other countries do not have the ability to do at present. This would obviously help the USA maintain its ‘‘space leadership’’. \_ Some space research, inherently global in nature, involves targets in geographic locations that are important to US interests. Earth observation research is a good example. China’s Earth observation data and other useful data and research achievements could enrich US research models or pools in the same fields. Scientists from both countries need to integrate data for research and development. Another example is that US scientists may need China’s ground-based magnetic storm data to perfect their space weather prediction model. It will be very helpful to both countries to undertake joint research in these areas. \_ Benefits for the US space industry. China is a very big market. China’s GDP increases by over 10% per year [9], which also means very rapid development and lots of business opportunities. The USA’s space industry and its other technology-intensive products are more obviously competitive than China’s. If Congress were to assume a more positive posture, the US space industry would be able to expand into China’s market and reap significant benefits. This would help to reduce the USA’s trade deficit as well. Europe has already entered China’s space market and received economic benefits in space business and other areas.

Coop Good – Miscalc

**Cooperation and Dialogue will prevent miscalculation with China**

**Chase, US Naval War College Research Professor, 1/26/11**

(Michael - Director of the Mahan Scholars Program at the US Naval War College, the Moderate Voice, Chinese Military Modernization: Challenges and Opportunities for the United States, 1/26/11, Lexis) AC

Once dismissed as a "junkyard army," the Chinese military is now impressing outside observers”and alarming China's neighbors”with its growing air, naval, missile, space, and information warfare capabilities. In recent years, China has deployed increasingly potent capabilities, including modern surface ships, advanced submarines, fourth-generation fighter aircraft, and conventional cruise and ballistic missiles, including an anti-ship ballistic missile designed to target U.S. aircraft carriers. China is also enhancing its command, control, communications, intelligence, surveillance, and reconnaissance systems and its space and cyber warfare capabilities. The internet leak of photos and videos unveiling China's new J-20 stealth fighter and the test flight of the aircraft during Secretary of Defense Robert Gates' recent visit to China seemed intended to underscore the growing capability of China's military. China's eagerness to showcase the faster than expected development of the J-20”and its determination to send a message to the United States”also ensured that concerns about the implications of a more powerful Chinese military would loom large when President Hu Jintao arrived in Washington for a state visit this week. China's growing military capabilities, along with incidents such as Beijing's anti-satellite test in January 2007 and its harassment of a U.S. surveillance ship in March 2009, are raising questions about whether an increasingly powerful China represents a threat to the U.S. and its allies. Fueling China's accelerating military modernization”and the concerns of analysts who see China as an emerging competitor”is the rapid growth of their defense budget. Beijing's increases in defense spending have enabled the People's Liberation Army to develop more credible options for using force against Taiwan and countering U.S. military intervention. Beyond Taiwan, PLA modernization is increasingly tied to China's growing role on the world stage. As China's economic and security interests become more global, the PLA's roles and missions are evolving to contend with an increasingly diverse set of challenges. To fulfill these expanded missions, China's leadership has tasked their military with enhancing its capabilities to participate in military operations other than war, such as the counter-piracy patrols that China's navy has been conducting in the Gulf of Aden. Such activities are seen as important to protecting China's growing global interests, but senior officers stress that their military's core mission remains deterring and winning wars. China continues to lag behind the United States military in many respects, but its new capabilities already present serious challenges to the security balance in the Asia-Pacific region. Beijing's advances in cyber-warfare, anti-satellite weapons, submarines, and ballistic missiles could threaten America's regional bases, the aircraft carriers that have become symbols of U.S. presence and power projection, and the space assets and computer networks that support them. The U.S. should counter these developments with a strategy to deter China from using force over Taiwan or in another regional dispute. Creating new operational concepts, developing cutting-edge information and electronic warfare capabilities, and strengthening the U.S. military's existing edge in the undersea environment would ensure the credibility of such a deterrence strategy. The U.S. should also practice operating without the full range of cyber and space assets to show China that attacks against American computer networks and satellites would not cripple the U.S. military. At the same time, attempts to strengthen deterrence must be calibrated to avoid inadvertently fueling China's worst fears about U.S. strategic intentions. Because of China's concern that the United States is determined to prevent its emergence as a great power through encirclement and containment, Washington should carefully weigh taking actions that could further exacerbate Chinese fears. To help prevent misunderstanding or miscalculation, the United States should continue to pursue dialogue with China on issues such as security on the Korean peninsula, space and cyber warfare, and strategic stability in the U.S.-China relationship. The United States should also seek to strengthen military cooperation with China in areas such as anti-piracy and humanitarian assistance operations. This week's state visit presents an opportunity for Presidents Obama and Hu to lead the United States and China toward a more cooperative relationship, but mutual strategic suspicion and a complex mix of convergent and divergent interests suggest that neither side should expect the path forward to be an easy one.

Coop Good – Space Peace

Peace in space is being held hostage to low Sino-US relations – plan is key to cooperative dialogue

Hitchens and Chen 8

(Theresa, Center for Defense Information, World Security Institute and David, CENTRA Technology, Inc, “Forging a Sino-US ‘‘grand bargain’’ in space” Space Policy 24 (2008) pg. 128–131, Available Online at Sciencedirect.com, Accessed June 28, 2011, EJONES)

While China and Russia have long sought a treaty to ban weapons in space, off-and-on interest in Washington in space-based missile defenses and a US reluctance to close off options for ensuring ‘‘space superiority’’ have thwarted any forward motion for decades. That said, one cannot easily dismiss the concerns of many in the US military leadership that China’s interest in a space weapons ban stems primarily from a desire to block US space-based missile defenses, as well as to limit the ability to contain China’s growing military presence in space. Indeed, while the draft treaty tabled by China and Russia earlier in 2008 at the UN Conference on Disarmament would prohibit space-based missile defenses, it would not ban terrestrially based anti-satellite weapons of the kind Beijing tested in January 2007. Further, one cannot totally dismiss US government arguments that using a traditional, technology- based arms control approach to ban counter-space weapons might prove to be problematic given the inherent difficulty of distinguishing between benign and offensive technology. In response, some who advocate a negotiated solution in space have put forth concepts for a ‘‘code of conduct’’ for space activities, which would outline rules of behavior in peacetime, something similar to those that govern traffic on the high seas, or set limitations on the rules of engagement during conflict [8]. Under such a code, for example, space users could agree not to engage in intentional creation of persistent debris in peacetime and foreswear destructive measures against satellites during conflict, as debris contaminates the space environment and thus presents a threat to all users. Another provision might be the establishment of a ‘‘zone of control’’ around a satellite into which intrusions of foreign objects would be seen as violations of sovereign territory and threats to the satellite. These provisions would establish norms of behavior that temper the headlong rush toward an arms race in space. Such interactions and mutually agreed upon norms may help provide escape ramps in future crisis escalation scenarios. In 2001, when a Chinese fighter jet collided with a US Navy reconnaissance plane, the lack of established norms of communication hampered a quick resolution to the crisis. Only some seven years later have the militaries of both countries established a crisis hotline, underscoring the need to open a dialogue earlier, rather than wait for a sudden emergency. While the Bush administration has recently signaled interest in voluntary transparency and confidence-building measures regarding the use of space, it continues to reject any legally binding instrument. China, meanwhile, has refused to consider anything less than a full-blown weapons ban treaty, to be negotiated under the auspices of the UN Conference on Disarmament. Thus, the quest for diplomatic constraints on any future anti-satellite arms race continues to be held hostage to the China–US stalemate.

Coop Good – Space Peace

China’s emergence as a space leader could risk miscalculation wars, but external pressure could encourage a peaceful space policy

Johnson-Freese, Chair for the Department of National Security Studies at the U.S. Naval War College, 2007

(Dr. Joan, “China’s Space Ambitions”, IFIR Security Studies Proliferation Papers, p. 2, Summer, http://www.ifri.org/files/Securite\_defense/China\_Space\_Johnson\_Freese.pdf, accessed July 8, 2011, NS)

On October 15, 2003 China became only the third nation capable of manned spaceflight, joining the United States and Russia in that exclusive club. Subsequently, its second manned launch, this time carrying two taikonauts,1 occurred on October 2, 2005. Then on January 11, 2007 China joined the United States and Russia in another exclusive club, becoming only the third nation to test an anti-satellite weapon (ASAT). Those two very different events indicate Chinese space activity involving a wide spectrum of capabilities. Capabilities are not especially hard to gauge; intentions, however, can be very difficult to discern and result in strategic miscalculations. Robert Jervis and others have also discussed the perils of ambiguity as related to security dilemmas,2 where a spiral of preparations and tensions are created when the protective actions of one state lead to reactive countermeasures by another state, potentially leading to conflict or even war. While China’s

Information Office of the State Council issued White Papers on space in both November 2000 and October 2006 detailing Chinese aims, principles and accomplishments, considerable speculation remains as to its pragmatic objectives in space. Because China has an expansive space program and given that 95% of space technology is dualuse, meaning of value to both the civilian and military communities, the question of China’s intentions in space has become a subject of worldwide scrutiny, particularly in the United States. It also means that one cannot consider Chinese intentions regarding military space without looking at its entire program. Further, even those space activities which are not directly related to the military, such as manned space activity, can have significant geostrategic value. It is my contention that China seeks to exploit space for all the benefits it can reap, civil and military, within a restricted budget. Given that space is an inherently expensive area of development, China will have to make hard choices regarding what areas to pursue, and which to forego. It also means that there is an opportunity to externally influence Chinese ambitions toward the peaceful uses of space.

Coop Good – Peaceful China Rise

China’s economic and military rise is happening – cooperation key to be able to adjust to it

Steinberg, Deputy Secretary of State, 10

(James B., American academic and political advisor, U.S. Department of State, 4-11-10, “U.S. - China Cooperation on Global Issues”, <http://www.state.gov/s/d/2010/141772.htm>, MLF, accessed 7-1-11)

I think, as I alluded briefly here and in more detail in an earlier speech I gave, I think one of the great challenges that we face is how we understand and how we adapt to China’s growing military power. We understand and accept the fact that along with economic growth that countries tend to develop their defensive capabilities, and that’s something by itself which is not necessarily objectionable. But at the same time, because China’s approach lacks the kind of transparency that we’d like, we do have questions about the long-term intentions, and that’s why we want to strengthen the opportunity for military-to-military exchanges and dialogues so that we have a better understanding of China’s goals, plans, and intentions and what’s driving its decisions over military modernization, not just in terms of equipment but also in terms of doctrine and its operations, to give us the assurance that what it is seeking to achieve is consistent with the security and broader security, political, and economic interests of others.

Cooperation allows China to rise peacefully

Logan, Specialist in energy policy, Congressional Research Service 9-29-08

(Jeffrey has a M.S. in environmental science and Master in Public Administration,1995, Indiana University, School of Public and Environmental Affairs B.S. in aerospace engineering and B.A. in general arts and sciences, 1985, Pennsylvania State University <http://www.fas.org/sgp/crs/row/RS22777.pdf> “China’s Space Program: Options for U.S.-China Cooperation” pg 6 accessed: 6-28-11) TJL

Offsetting the need for China’s unilateral development. Collaborating with China — instead of isolating it — may keep the country dependent on U.S. technology rather than forcing it to develop technologies alone. This can give the United States leverage in other areas of the relationship

Coop Good – China Threat

The only way to curb Chinese aggression is through cooperative missions and information sharing

Scott, Editor of Aviation Week and Space Technology, 8

(William B., Editor of Aviation Week and Space Technology, “CHINA’S PROLIFERATION PRACTICES, AND THE DEVELOPMENT OF ITS CYBER AND SPACE WARFARE CAPABILITIES,” Hearing before the US-China Economic and Security Review Commission, May 20, 2008, Pg. 25, <http://www.uscc.gov/hearings/2008hearings/transcripts/08_05_20_trans/08_05_20_trans.pdf>, JSkoog)

Cooperative U.S.-China space programs, such as joint deep-space exploration initiatives or having China become an International Space Station partner, would go a long way toward developing mutual respect, understanding and positive relationships among the two nations' space professionals. Such an approach can build on the economic ties our two nations already have forged, which are reducing the chances of terrestrial or in-space conflict. Deterrence Through Information Cooperative commercial and civil space programs, guided by a policy of mutually beneficial interaction among U.S. and Chinese space professionals, could lead to what might be termed "deterrence through information." For example, if China's leaders fully understand that shooting dozens of missiles at other nations' satellites would create so much orbital debris that nobody could safely launch a spacecraft for years, perhaps they would think twice about firing an ASAT. Further, if they know that America's advanced-technology weapons can disable Chinese satellites at will, without creating massive debris fields, and that U.S. satellites can maneuver or otherwise protect themselves, a preemptive ASAT strike miight be deemed inadvisable. In short, the message we should impart is: conflict in space would be a catastrophe for both the U.S. and China, so let's not go there.

The only way to avoid armed space conflict with China is cooperative threat reduction

Bachelder, president of the Worcester Area Mission Society of the United Church of Christ ‘08

(Robert S, 7/1/2008 Christian Century, 00095281, 7/1/2008, Vol. 125, Issue 13 “Shared Space” EBSCO host 7/1/11 BLG)

The informal ban on weapons-testing that had been in effect since the end of the cold war was shattered when China fired an ASAT at one of its old polar-orbiting satellites in January 2007. The test was probably a warning that China will contest American efforts to achieve military dominance in space. It confirmed the opinion of the U.S. defense establishment that an arms race is inevitable, and in February 2008 the U.S. Navy fired an Aegis missile at a dying reconnaissance satellite orbiting above the Pacific. The Pentagon said the maneuver was necessary to prevent the satellite from releasing a toxic cloud of hydrazine gas as it fell to earth. Analysts such as Harvard astrophysicist Jonathan McDowell say that there was no danger and that the exercise was intended to test U.S. capabilities and serve as a warning to China. As ethicist Glenn Stassen observes, a good way to reduce the likelihood of armed conflict is to identify and strengthen cooperative forces and trends already at work in the international system. John Clay Moltz of the Center for Non-Proliferation Studies at the Monterrey Institute and Joan Johnson-Freeze of the Naval War College contend that international activity in space can be shaped to become a positive sum game for all nations. They urge the U.S. to pursue a policy of cooperative threat reduction toward China and other potential space rivals.

Coop Good – Space Race

**The US must work with China in space or let China take over the space sphere altogether**

**Tkacik, retired U.S. diplomat, 10**

(John J., was Chief of China Intelligence in the U.S. Department of State during the Clinton Administration, The Washington Times, “China space program shoots for the moon”, January 8, <http://www.washingtontimes.com/news/2010/jan/08/china-eyes-high-ground/>) PG

The atrophying U.S. space program suggests that **America will be forced to cooperate with China in space, or else cede the high frontier of space to China altogether. The Pentagon is clearly alarmed by the prospect.** The chief of U.S. Strategic Command, Gen. Kevin Chilton, told reporters Nov. 3, “With regard to China’s [space] capabilities**, I think anyone who’s familiar with this business … would have to be absolutely amazed at the advancement that China has made in such a short period of time,** whether that be in their unmanned program or the manned program.” **NASA’s experts understand the capabilities, talents - and intentions - of their Chinese counterparts perhaps better than anyone outside China** and Russia. China’s Long March V rockets are in development now; **Russian space scientists now aid their Chinese counterparts** in perfecting the Shenzhou class of manned vehicles - closely modeled on the rugged, tried-and-true Soyuz; China has also purchased Russia’s spacesuit designs and the KURS and APAS rendezvous and docking systems**. In contrast, NASA has resigned itself to the realities that America’s space shuttles will be decommissioned by 2010** and, while the test-launch of the Ares 1-X heavy lift booster was successful, **the follow-on Constellation manned program does not have a budget that will get it off the blueprint tables. Nor is NASA staffed with the scientists needed to support it. The median age of NASA’s manned space engineers is now over 55.** Over a quarter are past retirement age**. Meanwhile, China’s average lunar probe engineer is about 33 years old and the Shenzhou manned-space program engineers average about 36.**

Coop Good – Space Tensions

China’s international space program is starting to take off – now is the key time to strengthen relations

Laxman, journalist who specializes in space exploration: tech and procedures, 11 (Srinivas, “China’s Space Mission: The Long March To The Moon And Mars”, Asian Scientist, 6/27/11, http://www.asianscientist.com/features/chinas-space-mission-moon-mars/, accessed 6/30/11, CW)

AsianScientist (Jun. 27, 2011) – On the 50th anniversary of the first human space flight by Yuri Gagarin, the Chinese government made an announcement which was extremely appropriate for the occasion: it will launch its own space station. This project was already on the cards, but it was formally confirmed during the 50th anniversary celebrations. Called Tiangong (天宫) or Heavenly Palace, the 60-ton space station will be constructed in orbit from a series of modules launched over the next few years. After the initial trials in docking and rendezvous, it will be manned by a three-man crew. The present International Space Station (ISS) weighs 419 tons and generally has a six-man crew or more. For quite some time, the US has been trying its best to include China in the ISS program, but the Chinese response has been lukewarm. The Chinese space station program envisages two spacecraft – Shenzhou-9 and Shenzhou-10 – being launched in 2012, which will dock with the Tiangong-1 module. The Chinese have invited scientists from all over the world to participate in the project, and speculation is rife that a Pakistani scientist could perhaps be one of the earliest guests. Apart from the scientific significance, space scientists feel that the Chinese space station project is endowed with a lot of political and geopolitical ramifications, and is being viewed as a clear challenge to US dominance in space.

Cooperation with China is key – lack of understanding incentivizes strike

Hitchens and Chen 8

(Theresa, Center for Defense Information, World Security Institute and David, CENTRA Technology, Inc, “Forging a Sino-US ‘‘grand bargain’’ in space” Space Policy 24 (2008) pg. 128–131, Available Online at Sciencedirect.com, Accessed June 28, 2011, EJONES)

Nevertheless, without an agreed upon understanding, the incentive to strike at what many Chinese strategists consider the Achilles’ heel of the US military machine is likely to remain a dominant consideration in China’s space strategy. Clearly, China’s leaders are driven by the strategic imperative to protect and project national sovereignty. This motivation has resulted in the Shenzhou manned spaceflight program and the Chang-e lunar probe mission, as well as the formation of cooperative associations such as the Asia–Pacific Space Cooperation Organization. An important dividend of these programs is the promotion of China’s national prestige, both domestically and abroad. As the defenders of China’s sovereignty and international image, the Chinese Communist Party (CCP) relies on such programs as a bulwark for the regime’s claim to legitimacy. Yet, even as the CCP stokes nationalistic zeal, it fears losing control of its citizens, making constructive outlets for nationalism, such as can be offered through international space cooperation, of vital importance. The next US president must recognize these incentives in the regime’s calculus, and leverage them as key points for agreeing on limits to the nascent space arms race.

Coop Good – Space Tensions

Cooperation serves as the best method to curb Chinese aggression

Pollpeter, specialist on China policy, 8

(Kevin, specialist on China policy and former member of the RAND think tank, “BUILDING FOR THE FUTURE: CHINA’S PROGRESS IN SPACE TECHNOLOGY DURING THE TENTH 5-YEAR PLAN AND THE U.S. RESPONSE,” March 2008, <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub852.pdf>, Jskoog)

The rise of China as a space power also raises the question of whether the United States should cooperate with China in space. The difficulty in deciding an appropriate response arises from the inability of both sides to determine whether their relationship will be friendly or hostile. Nevertheless, the United States is presented with four policy options to meet the changing dynamics presented by China’s space program: contain, compete, cooperate, and do nothing. Containment is the least viable of the four options, and as China becomes more integrated with the world, it will become even less practical. Competition may also be problematic. U.S.-China relations may be ambivalent, but extensive cooperation does take place in many araeas, and it is not apparent how defining China as a competitor in a space race will further relations. It is also not apparent whether the American public will support a race which will require additional funding with little short-term gain. Cooperation, on the other hand, has the potential to increase transparency and trust and to lessen competitive aspects that may lead to armed conflict. A policy that treats China as a friend, however, has its own shortcomings. Because China’s strategy is designed x to further its own national interests and because its interests are often not aligned with U.S. interests, it is unlikely that assisting China in increasing its space power may eliminate these differences and may, in fact, exacerbate them.

Cooperation would allow for a better understanding of China’s space policies

Logan, Specialist in energy policy, Congressional Research Service 9-29-08

(Jeffrey has a M.S. in environmental science and Master in Public Administration,1995, Indiana University, School of Public and Environmental Affairs B.S. in aerospace engineering and B.A. in general arts and sciences, 1985, Pennsylvania State University <http://www.fas.org/sgp/crs/row/RS22777.pdf> “China’s Space Program: Options for U.S.-China Cooperation,” pg. 6, accessed: 6-28-11) TJL

Improved transparency. Regular meetings could help the two nations understand each others’ intentions more clearly. Currently, there is mutual uncertainty and mistrust over space goals, resulting in the need for worst-case planning.

Space diplomacy will reduce competition between the US and China

Hitchens, Director of World Security Institute’s Center for Defense, 2007

(Theresa, “U.S.-Sino Relations in Space: From ‘War of Words’ to Cold War in Space?” China Security, p. 13-14, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=186>, Accessed June 30, 2011, NS)

Staving Off an ASAT Race Given that the United States and China now seem poised at the precipice of a dangerous competition to develop and deploy ASATs and other counter- space capabilities – a competition that threatens to draw in other players are well – what are the options for the wider international community in attempting to prevent Washington and Beijing from falling over the edge? The unfortunate truth is that there are not many, beyond continued diplomatic efforts to encourage both sides to tread more carefully. That said, those nations and international institutions committed to a weapons-free space environment should not throw up their hands in despair, but rather work together to reconsider how to push forward a collective space security agenda that can serve mutual interests rather than fan competition.

Coop Good – Chinese Militarization

Peaceful Coop can stop Chinese militarization-despite China’s current strategies

MacDonald, United States Institute of Peace, 5/11/11

[Bruce W., United States Institute of Peace, USIP.org, “Testimony before the U.S.-China Economic and Security Review Commission onThe Implications of China’s Military and Civil SpacePrograms” 5/11/11 <http://www.usip.org/files/resources/bmacdonald_testimony.pdf> , accessed 7/1/11, HK]

As significant a role that space diplomacy can play in contributing to space stability and responsible space stewardship, China’s activities in space arms control sadly do not provide any basis for optimism on Chinese, or PLA, intentions in space. China and Russia have for years promoted their joint draft “Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects (PPWT).” The PPWT proposes to ban all space weapons but provides no credible means for verification. When I approached one Chinese space specialist about verification a few years ago, he acknowledged that verification would be difficult but told me that “You Americans are so technologically clever – you’ll figure out a way”! The PPWT likely serves primarily as a way for China to buy time to enable them to attain a stronger military position, perhaps even catch up to the U.S., in a field where they were far behind us. With the previous U.S. opposition to international agreements on space, it also left a diplomatic vacuum that China and Russia skillfully filled with the PPWT, portraying an image of peaceful intentions in space. It is intriguing to note that with the EU and U.S. in recent months speaking favorably of a draft code of conduct that is a vastly more realistic step than the PPWT, the PLA is now attacking it as an attempt to impose Western regulations on China. This code of conduct provides an excellent vehicle to challenge China to support realistic and useful “rules of the road” for space, and other steps which I hope the U.S. will pursue. In my conversations with Russian and Chinese counterparts, I find serious Russian interest in this approach but sadly only intransigence from China. Current U.S. space policy and strategy walks back the U.S. aversion to space diplomacy and strikes the right noteson responsible space stewardship and addressing the issues of a space frontier that, at least inthe vicinity of earth, is becoming more of a settled environment that requires some form of management and rules of the road. This realistic direction for space diplomacy, and U.S. and allied support for such approaches, is both a sensible step and also diplomatically turns the tables on China

Coop Good – Chinese Militarization

No cooperation only has caused Chinese modernization of space

Hitchens and Chen 8

(Theresa, Center for Defense Information, World Security Institute and David, CENTRA Technology, Inc, “Forging a Sino-US ‘‘grand bargain’’ in space” Space Policy 24 (2008) pg. 128–131, Available Online at Sciencedirect.com, Accessed June 28, 2011, EJONES)

After the 1998 Strom Thurmond Defense Authorization Act imposed restrictions on the export of commercial satellites and related technologies under the State Department’s Munitions List and the International Traffic in Arms Regulations (ITAR), Beijing considered such policies as primarily an effort to contain China’s rise as a space power and to prevent its space industry from competing with US industry on the international market. The congressional rationale for the move was, and remains, concern about the transfer of space technology that could be used by the Chinese to improve their intercontinental ballistic missiles, even though technology migration has traditionally gone the other way around, from ballistic missiles to space launch vehicles. Whatever the motivation, the immediate effect of the export control shift was to all but close the Western satellite and launch market to China and vice versa, since US export law extends to all space systems that use US parts. US export laws may have slowed, but have demonstrably failed to ‘‘contain’’ China’s progressive development of space launch and satellite technology. They have also failed to prevent—and some argue have instead provoked— Sino-European cooperation in space, leading to the growth of an ‘‘ITAR-free’’ business model in both Europe and China, to the detriment of the US space industry. As noted by a recent report by the Center for Strategic and International Studies, ‘‘Not only have these requirements harmed our domestic technological and manufacturing base, but they have had a drastic negative effect on both the hard and soft power utilization of space’’ [11]. Further, the commercial satellite industry has long advocated the exemption of certain technologies from the list, arguing that these technologies are already available off-the-shelf. It seems that US government officials are finally listening, as the Pentagon’s Defense Technology Security Administration and the National Security Space Office are working to review satellite components with an eye to removing at least some of them from the Munitions List [12]. Thus, the cost of ITAR reform, with regard to commercial space, is in reality likely to be much less than some fear, and may be necessary for maintaining the viability of the US satellite industry.

Ceding space power allows China to give up its weapons

Hitchens and Chen 8

(Theresa, Center for Defense Information, World Security Institute and David, CENTRA Technology, Inc, “Forging a Sino-US ‘‘grand bargain’’ in space” Space Policy 24 (2008) pg. 128–131, Available Online at Sciencedirect.com, Accessed June 28, 2011, EJONES)

Considering Chinese investment in its space program as a centerpiece of national prestige and as a lever for economic development, the USA has the opportunity to link a variety of related economic incentives with opening, and concluding, negotiations on a code of conduct in space, including Chinese abandonment of destructive antisatellite weapons programs. These potential bargaining chips include such options as participation in the International Space Station (ISS), joint exploration missions, reform in US policies restricting sales of commercial satellite hardware, and licensing of Chinese launch services. In exchange, China might willingly restrict behaviors that could lead to strategic miscalculation in space, as well as certain forms of counter-space capabilities.

Coop Good – Chinese Militarization

China’s ASAT deterrence is based on a perceived US threat in the region – cooperation with China allows further US-Sino cooperation

Hitchens and Chen 8

(Theresa, Center for Defense Information, World Security Institute and David, CENTRA Technology, Inc, “Forging a Sino-US ‘‘grand bargain’’ in space” Space Policy 24 (2008) pg. 128–131, Available Online at Sciencedirect.com, Accessed June 28, 2011, EJONES)

China’s incentive to develop anti-satellite weapons results largely from the US military presence in the western Pacific and the US military’s reliance on satellites for its doctrine of net-centric warfare. As Ashley Tellis of the Carnegie Endowment for International Peace has argued, ‘‘The near-term objective of preventing what Beijing would call Taiwanese secession from the mainland—and defeating any US expeditionary forces that may be committed in support—remains the dominant consideration for China’s military modernization’’ [2]. To wit, the Pentagon has noted China’s diversified portfolio of anti-satellite technologies, including ‘‘kinetic energy weapons, high-powered lasers, high-powered microwave weapons, particle beam weapons, and electromagnetic pulse weapons for counterspace application’’ [3]. Some US researchers studying Chinese military doctrine have written that counter-space operations are seen as an increasingly necessary component of China’s military concept of ‘‘future ‘informationalized’ warfare’’, including hacking into satellite systems and other electronic attacks [4]. The logic of China’s investment in counter-space operations follows from what it sees as a regional security environment that, in the foreseeable future, will be dominated by an asymmetric balance of power vis-a` -vis the USA. Unless altered by domestic political will from the highest echelons of leadership, anti-satellite technologies will probably remain a part of its larger access denial strategy against the USA. Add to that a bilateral relationship peppered with crisis incidents, and often fueled by mutual misunderstanding, and the potential for a crisis situation to spiral out of control should give pause to any responsible leader. Since the Reagan era, US interest in on-orbit and anti-satellite weapons has stemmed from three intertwining strategic concerns: the threat of ballistic missile strike, protecting the space systems upon which the US military depends, and preventing an adversary from using space in the same way as the US military does to enhance its conventional military prowess. After President Reagan announced the Strategic Defense Initiative in the 1980s, ‘‘China began a program to modernize its strategic missile forces because of doubts about the survivability of its small nuclear deterrent’’ [5]. The Pentagon notes that the Chinese Navy is developing the necessary technologies to field a nuclear submarine fleet, a key to increasing the survivability of China’s nuclear deterrent in the face of a second-strike-nullifying ballistic missile shield [6]. The current US strategic policy of ‘‘space dominance’’ aims at ensuring US freedom of action in space, as well as the ability to deny the use of space to adversaries [7]. China, with some good reason, sees itself as particularly vulnerable to such space doctrine, and in response may feel compelled to develop countervailing measures, in order to counteract the proscriptions of US policy. The USA cannot reasonably be expected to abandon its space capabilities, but a more constructive modus vivendi can surely be found by demonstrating that both the USA and China are ‘‘responsible stakeholders’’ in the realm of space.

Coop Good – Solves Trust

US-Sino cooperation is key to better mutual cultural understanding that prevents a space arms race

Caldararo et al., graduate student University of Nebraska at Omaha studying

Public Administration, 08

(Kevin E Williams Deputy Director, Studies and Analyses, Assessments and Lessons Learned U.S. Air Force approved Michael, Jason Cantone graduated from the University of Nebraska College of Law with his J.D. and M.A. in Psychology and is currently a doctoral student in Law and Psychology. MEd Jonathan Cowin a senior at Creighton University, specializing in economics. Rachel Huggins junior at Creighton University studying political science and business administration. Hailey Rademacher junior at Creighton University, studying international relations and French Drew Sendelbach currently enrolled in the International Relations program to earn a Master of Arts degree from Creighton University “Global Innovation and Strategy Center Chinese Counterspace Intentions Fall 2008 – Project 08-05 December 2008, pg45-46 accessed:6-30-11, <http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html&identifier=ADA499438>.) TJL

Such views of the potential U.S. threat exacerbate already present fears, which serve to create a circular argument reminiscent of the violence escalation cycle discussed in psychological research. Any event could start the violence escalation sequence (e.g., the Chinese ASAT test in January 2007 and the Chinese Embassy bombing in Belgrade), which would then cause the U.S. to perceive China as a threat to international space cooperation, while at the same time China would see the U.S. as a similar threat and seek to challenge its hegemony. Both sides have merit to their arguments, as access to space and dualuse technologies for both civilian and military organizations understandably cause insecurity. Accordingly, China’s label of the U.S. as a hegemon that seeks to threaten or contain China could be seen as an appropriate response to U.S. policies and Congressional acts seeking to isolate China and prevent it from obtaining space technologies. While some progress has been made following the Cold War, many Chinese analysts remain highly critical of U.S policies and see the U.S. as actively seeking to manipulate China and subvert its return to power.174 In turn, the Chinese government’s response often fuels the U.S. perception that China must be isolated and prevented from acquiring space technology. Constant suspicion likely results in continued mistrust between states, allowing the escalation cycle to continue. For international progress to be made, the escalation cycle must be broken before a space arms race emerges. This break can also emerge through reciprocal understanding of different cultures. China can learn much from the economic and diplomatic actions of global powers and the U.S. can strive to better comprehend Chinese culture and interpersonal relations.

Coop Good – Solves Trust

U.S. transparency uniquely solves for U.S. leadership through example and will build genuine trust

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 57-58) EK

Second, the U.S. could set an example of transparency. For example, by proposing to the Chinese increased space situation awareness data-sharing, which could be hugely beneficial to the future Shenzhou missions, the U.S. can lead by example. The Chinese would of course need to respond in kind in a way to reassure U.S. skeptics, such as providing clarification on its microsatellite program and on-orbit rendezvous test. This will not be easy or immediately beneficial because China is in many ways allergic to transparency and will request more from the U.S. than it would ever give in return. Yet, this can present an initial opportunity to bring more communication, clarity, and perhaps even trust to the U.S.-China space relationship. Leading with data and information will also give more impetus to U.S.-China space relations than just a strategic dialogue. Furthermore, the U.S. could become more transparent with China about issues related to China’s fears of the U.S. space mission. Specifically, the U.S. could engage the Chinese on nuclear deterrence, regional BMD systems, and programs like Prompt Global Strike (PGS). China still maintains a relatively low number of intercontinental nuclear missiles and therefore believes its nuclear deterrent could be rendered moot by advanced U.S. ballistic missile defense systems. 172 These fears are compounded by programs like PGS in which the U.S. could theoretically quickly and efficiently strike Chinese nuclear missile silos with conventional munitions.

Coop Good – Leadership

If America doesn’t cooperate with China, leadership will be lost.

Tkacik, Research Fellow at the Heritage Foundation, ’10

(John J. Tkacik Jr., The Washington Times, 8 January 2010, p. 11, “China eyes high ground; Obama talks of cooperation, not competition on space exploration”, LexisNexis, 7.1.11, SWolff)

In November, Chinese air force commander Gen. Xu Qiliang observed that "competition between military forces is now turning toward the realm of space, [and] military modernization is ceaselessly expanding into space." But during his visit to Beijing a few days later, President Obama talked about "cooperation" rather than competition. In a joint statement with Chinese President Hu Jintao, the two leaders called for "a dialogue on human space flight and space exploration, based on the principles of transparency, reciprocity and mutual benefit." China's aerospace industry firms - which for decades have supplied dangerous missile technologies and equipment to Iran, North Korea and Pakistan, and which have been sanctioned ceaselessly by four successive U.S. presidents for their transgressions - will find the United States in a new suppliant posture. The atrophying U.S. space program suggests that America will be forced to cooperate with China in space, or else cede the high frontier of space to China altogether. In October, a White House committee headed by former Lockheed Martin Chairman Norman Augustine, reported that without $3 billion in additional funding, NASA has no plan that "permits human exploration to continue in any meaningful way." October's launch of the experimental Ares 1-X heavy lift rocket, while flawless, may well mark the end rather than the beginning of America's next-generation Constellation manned-space program. The space shuttle is scheduled for retirement this year and until Constellation gets off the ground, future American astronauts will rely on Russians - or Chinese - to get into orbit - if they want to get there at all. America's multitrillion-dollar deficits over the next 10 years are likely to dissuade the Obama administration from budgeting for Constellation until well after Mr. Obama leaves office, if then. The Pentagon is clearly alarmed by the prospect. The chief of U.S. Strategic Command, Gen. Kevin Chilton, told reporters Nov. 3, "With regard to China's [space] capabilities, I think anyone who's familiar with this business ... would have to be absolutely amazed at the advancement that China has made in such a short period of time, whether that be in their unmanned program or the manned program." Senior Chinese space officials have told their state media that China could be on the moon by 2022 at the outside. Other authoritative Chinese space engineers see a moon landing as a next step in the Tiangong program that will launch three Chinese space stations into Earth orbit between 2011 and 2015. In 2008, NASA scientists told the Bush White House that, with the technology currently available to the Chinese space program, Chinese cosmonauts could be on the moon by 2017. NASA sees China's strategy for a manned lunar landing as launch vehicle intensive. While America's notional Constellation moon project centers on a single - and still unbuilt - Ares-V "superheavy" lift booster for a direct ascent to the moon and two "lunar orbit rendezvous" operations, China will likely opt for two complex "Earth orbit rendezvous" maneuvers. This will require four "Long March V" rockets - in the same class as the Pentagon's Delta IV heavy lift launch vehicles - to put their cosmonauts on the moon. Launched in pairs over a two-week period from China's new Wenchang Space Center on the South China Sea island of Hainan, the four Long March Vs will each loft 26-ton payloads into low Earth orbits. The first mission will orbit the rocket for the translunar journey which will then join a second payload of an empty lunar module (LM) and its lunar-orbit rocket motor. Those first two unmanned payloads will rendezvous in Earth orbit and then fire off for the quarter-million-mile journey to the moon. Once the unmanned LM is in a stable lunar orbit, the second pair of missions will be launched into Earth's orbit; the first with another translunar rocket motor and the second with a combined payload comprising the lunar orbiting module, a modified service module, an Earth re-entry module and the manned Shenzhou capsule with three Chinese cosmonauts. NASA's experts understand the capabilities, talents - and intentions - of their Chinese counterparts perhaps better than anyone outside China and Russia. China's Long March V rockets are in development now; Russian space scientists now aid their Chinese counterparts in perfecting the Shenzhou class of manned vehicles - closely modeled on the rugged, tried-and-true Soyuz; China has also purchased Russia's spacesuit designs and the KURS and APAS rendezvous and docking systems. In contrast, NASA has resigned itself to the realities that America's space shuttles will be decommissioned by 2010 and, while the test-launch of the Ares 1-X heavy lift booster was successful, the follow-on Constellation manned program does not have a budget that will get it off the blueprint tables. […]

Failure to cooperate in space hurts US space leadership

Broniatowski, Faith, and. Sabathier, Center for Strategic and International Studies, 2006

[D. A., G. Ryan, Vincent G, Center for Strategic and International Studies, Human Space Exploration Initiative “The Case for Managed International Cooperation in Space Exploration” , 2006, Pages 1-2 <http://csis.org/files/media/csis/pubs/060918_managed_international_cooperation.pdf> , accessed 7/8/11, HK]

If the ISS were unilaterally terminated, the result would be a blow to the credibility of the United States, concomitant with the loss of trust of the foreign partners. A U.S. withdrawal could send the message that the purpose of the pro-gram is simply to divert resources from other nations’ space goals in order to prevent competition. This, in turn, would have a profoundly negative effect on any future U.S. leadership in space exploration. If possible, international cooperation must be terminated in such a way as to avoid portraying the terminating nation’s actions as unreliable, disrespectful, or malicious. As such, if the ISS is to be terminated, such a termination should be phrased as a joint de-cision made among all partners, in such a way as to leave open the possibility of future cooperation.

Coop Good – AT – Containment Good

Even if containment is good only cooperation makes it effective

Quigley, Maj, USAF, 9

(Erik N., “GEO-POLITICAL CONSIDERATIONS TO CHINA‘S RISE IN SPACE POWER” AIR COMMAND AND STAFF COLLEGE AIR UNIVERSITY, April, pg 25-26 <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA539644&Location=U2&doc=GetTRDoc.pdf>, accessed July 1, 2011, EJONES)

Once a solid revised national strategy, robust space acquisition funding levels, and GCC contingency plans are in place, US decision makers and warfighters need to know when and how to best employ them. To help dictate the execution of a solid national strategy and application of US space power, US leadership must gain and maintain a constant sight picture into China‘s true military space ambitions. In a similar light with current US national strategy‘s predominant theme of economic cooperation and partnering with China, US leadership should also push for open and honest international dialogue on space capability. Interaction between US-China military space development and employment activities should have a purpose to find mutual benefits for both countries‘ military space programs. For example, sharing information on heat shielding or hyper-sonic technologies could extend benefits into each country‘s civil space program and economy as well. In turn, cooperative efforts in space R&D may lead China scientists to be more open with their military space applications. It is short-sighted to believe that Chinese transparency will improve simply by establishing a strong economic partner since each country has realist intentions to first consider.

**Pursuing a confrontational policy with China backfires – plan comparatively better for relations and coop**

**Jinnette, Lieutenant Colonel, 9**

(James G., Strategy Research Project, “US China Policy: Time for Robust Engagement”, p. 7, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA497538) PG

Policy Option B. **An alternate, yet confrontational China policy option might be to pursue an aggressive, protectionist posture which assumes a hard-line against China, especially in the areas of trade policy, Taiwan, space, and resources.** If the Obama administration were to choose to work towards this unlikely option, **it might select aggressive actions to counter China’s efforts towards global engagement at perceived American expense**. Within a hard-hit US economy, this might be perceived by some to be part of an immediate solution to economic turmoil, especiall y for labor unions and industry currently affected by low-cost Chinese labor, currency manipulation, and trade deficits. Congress currently has many staunch advocates for aggressive measures, such as ‘human-rights’ preconditions designed to moderate labor costs in US favor. Furthermore, China is clearly engaged around the world as it expands its military, and probes deeply into African and Latin markets to secure resources. Over the long term, an aggressive counter strategy may be seen as an effective policy to counter China’s global reach. China has demonstrated that it respects assertive US actions in the Pacific, and today’s China appears to have a live-and-let-live policy as it inwardly pursues a vibrant internal economy. Unfortunately**, although aggressive economic protectionism coupled with a provocative military policy may be one method to steer Chinese actions over the short term, this sort of aggressive posture against China would likely damage the relationship severely over the coming decades. Most importantly, this approach could neutralize US efforts to encourage Chinese diplomatic support for US interests, such as the Korea-focused six-party talks. Ultimately, an increasingly confrontational China policy would become a self-defeating strategy for America, and therefore should be a non-starter in the policy debate.**

Coop Good – Cost

Co-operation reduces spending

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. 15, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA539619, accessed 6/29/11) EK

Another benefit mentioned earlier is cost savings, which would be attractive for both nations. For most countries, budgets for space are insufficient or limited to the point where they depend on international space cooperation to meet their goals.85 Exceptions to this in some degree are Russia, the U.S. and China, as all have achieved their own manned space programs. President Bush’s “Vision for Space Exploration” announcement in 2004 called for “redirecting NASA’s human exploration program from low Earth orbit to the Moon, Mars, and worlds beyond.”86 The timeframe specified in this announcement for the return to the moon was between 2015-2020, carrying a price tag of $104 billion.87 China too has ambitions for manned missions to moon, so spreading the cost could prove beneficial to both nations.

Coop in space reduces costs for the US

Broniatowski, Faith, and. Sabathier, Center for Strategic and International Studies, 2006

[D. A., G. Ryan, Vincent G, Center for Strategic and International Studies, Human Space Exploration Initiative “The Case for Managed International Cooperation in Space Exploration” , 2006, Pages 1-2 <http://csis.org/files/media/csis/pubs/060918_managed_international_cooperation.pdf> , accessed 7/8/11, HK]

It is common knowledge that international cooperation in space exploration has the potential to reduce a partner’s costs by spreading the burden to other nations. Although additional overhead costs increase the overall cost of any international cooperative endeavor, these costs are spread among partners. As per-partner cost decreases, per-partner utility increases. Space exploration has proven to be an expensive activity. Indeed, the more that any given admini-stration and Congress must spend to maintain and/or expand the functionality of a program like the ISS, the less util-ity will be derived. Therefore, a nation will have an incentive to engage in international cooperation when doing so can reduce that nation’s costs. This is particularly true for nations whose space exploration budget is insufficient to execute their space exploration goals. Aside from the United States, and possibly China, international cooperation is necessary for all other space-faring nations simply due to the large costs involved.

Coop Good – Cost

Cooperation with China costs little and only benefits US exploration

Hitchens and Chen 8

(Theresa, Center for Defense Information, World Security Institute and David, CENTRA Technology, Inc, “Forging a Sino-US ‘‘grand bargain’’ in space” Space Policy 24 (2008) pg. 128–131, Available Online at Sciencedirect.com, Accessed June 28, 2011, EJONES)

Providing what the Chinese want in civil and commercial space arguably would cost the USA little, and in this value–cost differential exists the potential of a mutually beneficial agreement. In international prestige, no greater prize currently exists for China than to be recognized and be admitted as a partner in the ISS. While the ISS program would benefit from Chinese investment and the potential use of Shenzhou modules for crew or cargo transport, the reality is that China needs ISS more than ISS needs the Chinese, even with the imminent retirement of the Shuttle fleet. With the successful docking and cargo transfer of the European Space Agency’s Automatic Transfer Vehicle in March 2008, the need for a backup to Soyuz is not yet a dire urgency [10]. The approach can be gradual, with perhaps the visit of a Chinese space tourist to the station, before the docking of a Shenzhou cargo vehicle, then perhaps the inclusion of a Chinese module to the station, culminating in a routine rotation of Chinese personnel on the station. Indeed, ISS participation offers a stepwise schedule of incentives in negotiations with the Chinese.

Coop Good – NASA Benefits

Chinese space program key to ensure future NASA programs – now is the key time to cooperate

AP, Junior Editor at the Shanghaiist, 10

(Tiffany, Shanghaiist, “Three-legged space race for China and US?”, 10/18/10, <http://shanghaiist.com/2010/10/18/post_29.php>, accessed 7/1/11, CW)

NASA head Charles Bolden is currently in Beijing on a six-day visit to discuss the possibility of a joint space program with China. As US space exploration hit a few speed bumps this year, now more than ever seems the right time to play nice with China whose own space program has really taken off (pun intended). At the end of 2009, Bolden had said Washington was ready to discuss partners space projects with China. Then 2010 saw recession-hit America stall its Constellation mission to return Americans to the Moon and explore Mars because of financial difficulties. In sharp contrast to that, China has enjoyed a fair few successes lately. It smoothly launched Chang'e 2 at the beginning of this month and its space program now ranks third in the world, after the US and Russia. That being said, space analyst, Morris Jones comments that nothing too exciting is going to be happening at these meetings. "Bolden is there basically just to shake a few hands. It's the first step in a very long process to get co-operation between the US and China in space flight...[r]elations between the US and China are very bad at the moment for all sorts of political and economic reasons." You don't say. Could it have to do with China callling the US a preening pig?

US needs to cooperate with China for shuttles

Klotz, Journalist specializing in NASA space science and commercial space, 2010

(Irene, “U.S. Opens Space Doors To China,” Discovery News, <http://news.discovery.com/space/nasa-space-china.html>, June 30, accessed July 8, 2011, NS)

China carries considerable baggage, including its development, sales and use of military technologies, but also a key asset: a proven space transportation system, something the United States will soon be without.

Two space shuttle missions remain before the fleet is retired after 30 years of service, primarily because of high operating costs. Obama wants to buy astronauts rides on commercial carriers, but none currently exist. That leaves the United States dependent on Russia to fly astronauts to the station.

"We're rather thin in launch capabilities right now," said Joan Johnson-Freese, who oversees the Naval War College's department of National Security Studies.

China's human space program made its debut in 2003 with the launching of its first astronaut into orbit aboard a capsule known as Shenzhou. Five more Chinese astronauts flew during follow-on missions in 2005 and 2008, the latter of which included a spacewalk.

China has announced plans to build a space station, the first piece of which is scheduled for launch next year.

Under the new U.S. space policy, "at least we're going to stop pretending that the Chinese don't exist in terms of space exploration," Johnson-Freese told Discovery News. "Now the doors are open."

Coop Good – Exploration (1/2)

Collaboration between China and the US reduces the cost of future space missions

Baker and Pollpeter, space policy experts at the RAND Corporation, 4

(John C, Kevin L, space policy experts at the RAND Corporation, “A Future for US-China Space Cooperation?” RAND Corporation, via Space News, December 13, 2004, <http://www.rand.org/commentary/2004/12/13/SN.html>, accessed 7/2/11, JSkoog)

During the post-Apollo era, U.S. space exploration programs have been burdened by unrealistic expectations and inadequate funding that sometimes led to canceled or scaled-back programs. Transporting humans into space for extended periods remains expensive, risky and technically demanding. Cooperation with China on human space flight provides opportunities for collaboration that could reduce the cost of major missions such as returning to the moon and long-duration flights to Mars. The Chinese would expect to benefit from cooperation with the more advanced U.S. space program, gaining increased prestige and taking a great leap forward by getting access to U.S. knowledge, experience and technology. However, because most space technologies and skills are dual-use in nature — meaning they also can be used to develop space systems for military use — America wants to be sure China doesn't use space cooperation as a tool to strengthen its military might. China has strong military reasons to become a major space power and many Chinese writings on space argue that China should develop space weapons in addition to militarizing space. These technologies could be used against U.S. forces if an armed conflict arises over Taiwan. China could go a long way in addressing American concerns by increasing the transparency of its space program to reduce uncertainties over its intentions in space. A big step in this direction would be for China to remove its human space flight program from military control and establish a civil organization with direct responsibility for human space flight that would be better suited to working with NASA. The U.S. experience with the Soviet Union, and later with Russia, offer some insights on the promise and challenges of international space cooperation. Nearly three decades ago the two countries proceeded with the Apollo-Soyuz docking mission despite Cold War tensions. In recent years, the United States has benefited from its cooperation with Russia in preparing for, constructing and operating the international space station. Cooperation has not been easy, but it has been essential for making progress in human space activities, particularly since the Columbia shuttle accident. While the United States may have apprehensions about partnering with China in space, other nations do not. China is becoming an attractive partner for Europe and Russia, which are less inhibited in selling dual-use technologies to China. European nations are already partnering with China on significant space ventures, including the Galileo satellite navigation project. Cooperation with Russia or Europe could provide China with much of the same technologies that the U.S. hopes to prevent China from obtaining. Chinese cooperation on major space efforts without U.S. involvement could threaten to erode the U.S. leadership position as the world's top space power. As with all areas of international relations, the United States must decide the extent it wants to proceed on its own path or collaborate with other countries to achieve common goals. The financial and technical challenges of returning to the moon make a compelling argument for U.S.-Chinese cooperation. But if Washington sees benefits in exploring the opportunities for collaboration with Beijing, it must also identify ways of minimizing potential risks to U.S. national security. Beginning a dialogue that emphasizes greater transparency in U.S.-China civil space activities would be a good start. C

Coop Good – Exploration (2/2)

China’s involvement in space policy sparks economic growth and further exploration

Xiaobing, researcher at the China Institute of Contemporary International Relations, 6

(Guo, researcher at the China Institute of Contemporary International Relations, “Blockade on China or the United States U.S. Regulatory Policies on Space Technology Exports to China,” 2006, Issue 2, China Security Journal, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=249&Itemid=8>, accessed, y/2/11, JSkoog)

Firstly, the U.S.-led ISS has found itself in a difficult position following the U.S. Space Shuttle accidents. As a result, projects undertaken by the United States have been delayed from time to time. Currently, transportation of personnel between Earth and the station rely completely on Russian spacecraft. Much uncertainty has therefore been added to the construction of the space station and there have been instances of astronauts unable to return to the Earth on time. As China’s manned space flight technology gradually matures, adopting Chinese spacecraft as a backup transport would provide for a more stable and secure operation of the space station. The cost of building the station will also decline significantly following China’s participation. Presently, each launch of a shuttle costs the United States approximately $1 billion, while Russia spends even more per launch. China’s manned space flight program has been proven to be safe and reliable. China has now used the Long-March rocket series for 42 consecutive successful launches from 1996 to 2005 without incident, effectively ending the incident-prone period in the mid-1990s. More importantly, China’s participation in the building of the ISS could further highlight the symbolic meaning of Eastern and Western integration. Secondly, the United States should take advantage of China’s low-cost space launch capability and jointly develop the international commercial satellite market. Some industry experts believe that if the United States made full use of China’s launch capacity in the next five years, it would be possible to bring $8 billion worth of benefits and 16,000 job opportunities to the U.S.space industry.15

Space co-op good and encourages research for future missions– ISS proves

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. 13-14, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA539619, accessed 6/29/11) EK

The ISS is a key example of how space cooperation with Russia has been beneficial to the U.S. In February 2003, Russian Soyuz spacecraft were the only means available to travel to and from the ISS for U.S. astronauts following the Columbia space shuttle accident. This reliance on the Russian Soyuz spacecraft to ferry supplies and U.S. astronauts to and from the ISS lasted until NASA shuttle missions resumed in 2005. The U.S. will again be dependent on Russian Soyuz spacecraft when the shuttle program is retired (as currently scheduled) in 2010 until the new Crew Exploration Vehicle (CEV) is available for NASA to use.77 Russian involvement with the ISS began in 1993, when President Clinton added Russia to the international endeavor that already consisted of the U.S., Europe, Japan and Canada.78 Although originally brought onboard partly to encourage compliance with non-proliferation of ballistic missile technology, the Russians proved valuable and quite significant in the international team. In addition to providing a means for spacelift to and from the ISS, the Russians were important during Phase 1 of the ISS development with U.S. involvement on the Mir space station. During Phase 1, Russians flew onboard the space shuttle seven times and on nine occasions the space shuttle docked with Mir.79 The ISS has proven to be the most successful space cooperation program to date for NASA. International cooperation for this venture includes the U.S. (NASA), the Russian Federal Space Agency, the Canadian Space Agency, Japan Aerospace Exploration Agency and the ESA which includes the following countries: Belgium, Denmark, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland and the UK.80 Hosting 19 research facilities, the ISS gives international partners the ability to conduct research and scientific experiments in the low gravity environments of Earth’s orbit. This research, along with men and women living in and adapting to the space environment, will provide the foundation for future missions to the Moon and Mars.81

Coop Good – Space Science (1/2)

**The USA and China should cooperate first on Space Science, allows for best cooperation**

**Zhou, Center for Space and Applied Sciences, 8**

(Yi – Chinese Academy of the Sciences and Professor at George Washington University, Perspectives on Sino-US cooperation in civil space programs, Science Direct, Space Policy 24 (2008) 132-139) AC

Lessons from China and the ESA’s DSP cooperative program and other positive collaboration experiences could be applied to space cooperation between China and the USA in the future: \_ Space science is the most likely cooperative area between the two countries in the near future: 1. China demonstrated an interest in cooperation with other countries in its Eleventh Space Development Plan [7]. China’s international space cooperation policy places a relatively high priority on international space science cooperation and Earth observation data sharing. 2. Space science, space applications and space technology are the three fields under development in China. In recent years China has implemented more and more space science projects in which funding is reliable and stable, although the amount is usually limited. It is different from NASA’s space budget for missions, which is reviewed every year. 3. Compared with other space areas, space science is one of China’s comparative research advantages. In some areas it possesses international-level research teams or laboratories. Their research and international communication abilities should receive more recognition. 4. Space science is less related to sensitive technology compared with other space programs. There are some limited risks in terms of transfer of key technologies to China and other countries, but it is possible for both countries to take preventative measures from the beginning to avoid these problems, as ESA did. 5. Space science is similar to other science areas; it is open to discovery. The ultimate objective of space science is to advance human knowledge in various fields. Science also abstains from unnecessary repetition. Through cooperative efforts, space science will effectively avoid duplicated efforts and save money and other resources. 6. China has a record of successful cooperation in space science with other countries. It cooperates with ESA, France and Russia. Through the DSP ESA scientists, engineers and space project managers have developed good communication and understanding with Chinese colleagues. Most ESA participants on the project have found that their Chinese colleagues can communicate effectively. Chinese space science professionals have also improved their science research and management ability through cooperation with Europe. These experiences have laid the groundwork for successfully overcoming language, management and cultural differences between China and the USA when cooperating on space programs.

Coop Good – Space Science (2/2)

US-China cooperation would solve for funding, exploration and technology; it’s necessary for further space developments

Rutkowski, master’s degree candidate at the School of Advanced International Studies specializing in economic cooperation with China, 2009

(Ryan, “US-China Cooperation in Manned-Space Exploration,” Middle Path, <http://rrutkows.blogspot.com/2009/02/us-china-cooperation-in-manned-space.html>, February 21, accessed July 7, 2011, NS)

However, the continued reluctance to pursue U.S. and China space cooperation, ignores the benefits of such cooperation, namely promote mutual understanding, cost savings, improved transparency, and ensuring long-term gains in human space exploration. Similar with US-Russian cooperation, US-Chinese space cooperation will allow for a cultural exchange through collaboration with US and Chinese astronauts and scientists. China could be a vital source of funding to reduce the rising costs for an expanding U.S. space program. Indeed, China and the US could collaborate on joint-projects, such as ISS or even a lunar base that could help reduce the cost of investment in space exploration for both countries. US-China space collaboration would also reduce security tensions, especially in space-based weapons, by increasing transparency of the long-term intentions of both countries in space technology. Finally, U.S. and Chinese civilian space programs could recognize a common purpose and commitment to the development of space technology to promote progress in human space exploration to the moon, mars, and beyond.

U.S-China space cooperation is vital to future progress in space technology and space exploration. The U.S. and China could engage in non-sensitive data and information sharing from satellites, such as debris management, environmental and meteorological conditions, and navigation. The two countries could also engage in a space policy dialogue similar to the annual strategic economic dialogue to build a better understanding of civilian and military space objectives and a common vision for space exploration initiatives. Finally, the U.S. and China could launch bi-lateral and multi-lateral joint-projects with ISS, lunar expeditions, and eventual mars exploration. Ultimately, the future of U.S.-China space cooperation is a necessity for continuation of human progress in exploring our planet, solar system, and worlds beyond.

Key to scientific innovation

China Through a Lens, 3/4/02

[China Through a Lens, “Sci-tech Cooperation: a Win-Win 30-year History Between China and US”3/4/02, <http://www.china.org.cn/english/china-us/27985.htm>, accessed 6/31/11, HK]

Through the equal exchange with the United States, China has learned and drawn the world’s advanced scientific theory and management methods, become well informed about the latest scientific and technological level information and development potential, learned advanced expertise or theories, research methods and technologies, and trained a large batch of high-level talents in science and technology. Take the Chinese Academy of Sciences, for instance: in the past 20 years, about 10,000 technicians or researchers went to America for study or research, taking up almost one fourth of the total number of people sent by the academy for overseas study or research. Most of the leaders or backbone personnel of the academy and of its attached branches all have experience in studying or working in the US before, such as BaiChunli, Hong Guofan, Ma Zhiming and some other highly reputed scientists. Officials from the Ministry of Science and Technology said that Sino-US science and technology cooperation is a two-sided, reciprocal and win-win process, with both sides benefiting from each other at the same time. Through the exchange and communication between two sides, a deep understanding in science and technology has been reached within scientific circles on both sides and a broad and comprehensive cooperation foundation has been shaped. Thanks to such exchanges and cooperation, the two countries have shared many important scientific data as well.

**Coop Good – China Space Program**

**China benefits immensely from cooperation**

**Zhou, Center for Space and applied Sciences, 8**

(Yi – Chinese Academy of the Sciences and Professor at George Washington University, Perspectives on Sino-US cooperation in civil space programs, Science Direct, Space Policy 24 (2008) 132-139) AC

The mutual benefits of space cooperation Both China and the USA are important countries in global politics, economics and space activity. Both countries’ national space policies are supportive of international cooperation on space activities. They have also made progress and benefited from space cooperation with their partners in past years. However, there is only a limited number of individuals from the two countries visiting each other on a non-official basis and sparse information exchange on space. China and the USA have no government space cooperation agreement. China does not have any cooperative space projects with NASA either, although both countries have joined other multilateral government agreements, such as the International Living with a Star (ILWS), Committee on Earth Observation Satellites (CEOS), the Global Exploration Strategy, the Outer Space Treaty and other related international space law treaties. Can China become a new partner of the USA in the near future after Europe, Japan and even Russia, and directly collaborate on space with it? Would both countries benefit from bilateral space collaboration? On the one hand, there are many obvious potential benefits that could emerge for China’s space program. According to China’s official space policy, the country will develop programs balanced between space science, space technology and space applications. The objective is grand, but it is difficult to attain these goals because of China’s present limited space capability, budget and experience. Cooperation with developed space countries, including Russia, Europe and the USA will be a short cut for China to obtain these objectives. For example: \_ Bilateral cooperation on space science missions will improve China’s scientific instrument development and data analysis capability, as well as its research system capability. \_ Bilateral cooperation on human spaceflight will quicken China’s breakthrough in the key technology problems of human spaceflight and related areas. \_ By developing its space technology, China will improve the competitive ability of its space products in the global market. \_ Bilateral space cooperation will improve the level of professionalism and project management in the field. \_ Civil space cooperation will potentially promote China’s military modernization via dual use space technology in some limited areas, although cooperation with the USA could weaken the independence of current Chinese space technology efforts in general. Indeed, one of the main reasons why China has used cooperation with other countries is to speed up its indigenous space effort by participating in and learning from the experience of different programs, rather than focusing on attempting to acquire knowledge of key technologies.

Coop Good – Competitiveness (1/2)

Only through a cooperative strategy with China can war be avoided-continued isolationist policies risk a loss of US primacy

Moltz, Ph.D at Naval Postgraduate School, 11

(Dr. James Clay, “China’s Space Technology: International Dynamics and Implications for the United States,” May 11, 2011, Accessed 6-30-11, <http://www.uscc.gov/hearings/2011hearings/written_testimonies/11_05_11_wrt/11_05_11_moltz_testimony.pdf>, JSkoog)

The marketplace for space technology has become globalized. It is also now much less dependent on U.S. products. For this reason, our strategy aimed at isolating China in space has become ineffective. Other advanced countries recognize the value of the Chinese space market and can produce technologies that are attractive to China. The United States stands aside to its own disadvantage and to the detriment of our space competitiveness. Russians and Europeans have ITAR­free products that provide nearly comparable space services. Overly restrictive export controls also harm U.S. political influence in the space field, as emerging countries form ties with China as a favored supplier. But, as noted, the United States should not change its space policy without reciprocity. Beijing will need to show more transparency and a willingness to accept restraints on its military programs, as well as new openness in terms of its domestic market. Continued stagnation in the bilateral space relationship and the imposition of blanket ITAR controls on U.S. space technology worldwide, however, puts the United States at risk of losing additional market share in satellites. It also isolates the United States from its own friends and allies, while heightening mistrust and prospects for conflict with China in the space security realm. Renewing civil and commercial space cooperation with China—as begun by the Reagan administration—is not a blank check and need not provide China with sensitive technologies. Instead, it can be carefully structured to allow reasonable cooperation in space science and in space commerce involving products and services available on the international market. Similarly, building a firm basis for space security relations—while recognizing our differences with China—should be pursued out of American interests. Such contacts need to be regularized and used to prevent harmful activities, increase transparency, and reduce tensions. Absent such contacts, Finally, we need to pursue closer space­related links to U.S. allies and friends, especially in Asia, to help strengthen U.S. capabilities and resiliency. Such actions will help create a stronger political network for U.S. space leadership and establish lasting cooperative ties. Fortunately, the administration has begun such work in the context of the new National Security Space Strategy. But it needs to stay the course and to keep Congress informed of its progress.

Coop Good – Competitiveness (2/2)

Tech and energy research is key to US-Sino competitiveness

Cao, columnist for UPI Asia, 12/2/08

[Cong, columnist for UPI Asia and senior research associate with the Neil D. Levin Graduate Institute of International Relations and Commerce at the State University of New York, UPI Asia, “Sino-U.S. technology cooperation is vital”, 12/2/08, <http://www.upiasia.com/Society_Culture/2008/12/02/sino-us_technology_cooperation_is_vital/6491/>, accessed 6/31/11, HK]

Barack Obama will become the next president of the United States on Jan. 20, 2009. While the China issue was not at the forefront during the presidential election, this does not mean that U.S.-China relations will remain low-profile under the new administration. There is no doubt that conflicts could arise over the issues of trade, human rights and especially Taiwan. Had there not been terrorist attacks on the United States, the relationship between these two countries would have not been as cozy as it has been over the past seven years. On the other hand, there is equally no doubt that both countries – the largest developed and developing economies – have many shared interests. In addition to the war on terror and nuclear proliferation, science and technology and some other areas with technological components will be where the two countries could join forces. . China’s economic development over the past 30 years has been resource intensive and especially energy intensive. This has not only caused a dramatic rise in the prices of related commodities globally as China has sought them out, but it has also generated enormous environmental hazards both inside and outside of China. It is reported that pollutants from Beijing have reached as far as Los Angeles. The more coal-based power plants there are generating electricity in China, the higher the price Americans will have to pay, and the more pollution will be spread to the United States and elsewhere. Therefore, it is in the interest of the United States to cooperate with China by transferring clean-coal and nuclear energy technologies. Public health is another area of interest to both countries. While the spread of SARS from China to the world, including the United States, signaled that combating infectious diseases has become a global endeavor, the recent incidents in which melamine has been found in pet food and baby formula have led to the establishment of offices in China by the U.S. Food and Drug Administration. In fact, the United States and China have been working together for a long time to find the causes of ailments such as esophageal and stomach cancers among some Chinese and an alternative way to treat AIDS patients. With the easy mobility of capital and goods and especially people across borders, more multinational corporations, including many based in the United States, have moved their sophisticated operations to China to make use of its highly educated and inexpensive yet underutilized talent pool. In the meantime, the Chinese have also found the United States to be an ideal place for their pursuit of advanced studies and cutting-edge research. Indeed, Chinese are the second largest group, next to Indians, enrolled in American universities, and the largest group of international scholars in the United States. Chinese who have doctorates in science and engineering are the largest group with such high qualifications in the American science and engineering workforce. Co-authored papers between Chinese and American scientists have contributed to at least one-quarter of all internationally collaborative papers involving Chinese. However, the restrictions imposed on the entry into the United States of talented people in high-technology disciplines, many being Chinese, out of national security concerns in the aftermath of 9/11 have, to some extent, put the competitive advantage of the United States in jeopardy. Unfortunately, such limits still exist, despite repeated and continuous appeals from the American scientific community to loosen them. Hopefully, the Obama administration will have a new way of thinking in this regard. Of course, U.S-China cooperation in science and technology may have unintended consequences. For example, China may gain in competitiveness over the United States; many of the technologies are dual use, meaning they can be used for both civilian and military purposes. However, if the United States and China could form strategic partnerships in other areas as well, the close relationship in science and technology could only be a win-win situation for both countries and would make the world a better place.

Coop Good – Environment

US-China coop key to global environment and energy

Stark, Newsline Staff Writer, 9/10/10

[Anne M., Newsline Staff Writer,Newsline, “Lab is partner in U.S.-China clean energy center” 9/10/10, <https://newsline.llnl.gov/_rev02/articles/2010/sep/09.10.10-energy.php>, accessed 6/31/11, HK]

Two consortia — one led by the West Virginia University that includes the Laboratory as a partner and another led by the University of Michigan — will receive a total of $25 million during the next five years under the U.S.-China Clean Energy Research Center (CERC). The project will facilitate joint research and development of clean energy technologies by the United States and China. The West Virginia University consortium that includes LLNL will develop and test new technologies for carbon capture and sequestration. “We believe strongly that cooperation between the United States and China on clean coal and carbon capture and sequestration (CCS) is critical to national security and global energy and environmental interests,” said Julio Friedmann, the Laboratory’s director of the carbon management program and technical program manager for the partnership. “We are honored to be selected with our partners to help facilitate this important new chapter in Sino-U.S. collaboration. “The U.S. team was built around working on applied scientific challenges in large-scale projects and deployments. We look forward to working closely with our Chinese counterparts to find opportunities to collaborate that serve the needs of both nations,” he added. CCS is a process that separates and captures carbon dioxide (CO2) from industrial and power plant flue streams, then compresses the gas and stores it underground, most likely in geological formations. The process essentially captures the greenhouse gas emissions before they enter the atmosphere. Livermore has a long history in CCS technology by blending computer science, geology, ecology, atmospheric science and other disciplines to find solutions to a number of challenges facing the development and safe operation of CCS facilities. Areas that Livermore specializes in are: evaluating strategies for the co-production of water; predicting the consequences of releases of CO2; simulating subsurface pressure build-up; modeling reactive transport of CO2 in groundwater; monitoring CO2 plumes in the subsurface; and characterizing and assessing subsurface geology.

Coop Good – Environment & Econ

Environmental coop key to economy and promotes further development

White House, 11/17/09

[White House, “U.S.-China Joint Statement” 11/17/09, <http://www.whitehouse.gov/the-press-office/us-china-joint-statement>, accessed 6/31/11, HK]

The two sides held a constructive and productive dialogue on the issue of climate change. They underscored that climate change is one of the greatest challenges of our time. The two sides maintain that a vigorous response is necessary and that international cooperation is indispensable in responding to this challenge. They are convinced of the need to address climate change in a manner that respects the priority of economic and social development in developing countries and are equally convinced that transitioning to a low-carbon economy is an opportunity to promote continued economic growth and sustainable development in all countries. Regarding the upcoming Copenhagen Conference, both sides agree on the importance of actively furthering the full, effective and sustained implementation of the United Nations Framework Convention on Climate Change in accordance with the Bali Action Plan. The United States and China, consistent with their national circumstances, resolve to take significant mitigation actions and recognize the important role that their countries play in promoting a sustainable outcome that will strengthen the world’s ability to combat climate change.The two sides resolve to stand behind these commitments. In this context both sides believe that, while striving for final legal agreement, an agreed outcome at Copenhagen should, based on the principle of common but differentiated responsibilities and respective capabilities, include emission reduction targets of developed countries and nationally appropriate mitigation actions of developing countries. The outcome should also substantially scale up financial assistance to developing countries, promote technology development, dissemination and transfer, pay particular attention to the needs of the poorest and most vulnerable to adapt to climate change, promote steps to preserve and enhance forests, and provide for full transparency with respect to the implementation of mitigation measures and provision of financial, technology and capacity building support. The two sides are committed to working together and with other countries in the weeks ahead for a successful outcome at Copenhagen.

Coop Good – Environment & Prolif

Energy coop key to environment and non-prolif

White House, 11/17/09

[White House, “U.S.-China Joint Statement” 11/17/09, <http://www.whitehouse.gov/the-press-office/us-china-joint-statement>, accessed 6/31/11, HK]

The two sides strongly welcomed work in both countries to promote 21st century coal technologies. They agreed to promote cooperation on large-scale carbon capture and sequestration (CCS) demonstration projects and to begin work immediately on the development, deployment, diffusion, and transfer of CCS technology. The two sides welcomed recent agreements between Chinese and U.S. companies, universities, and research institutions to cooperate on CCS and more efficient coal technologies. The two sides welcomed the signing of the Memorandum of Cooperation between the Environmental Protection Agency of the United States and the National Development and Reform Commission of China to Build Capacity to Address Climate Change. The two sides welcomed the launch of The U.S.-China Renewable Energy Partnership. Through this Partnership, the two countries will chart a pathway to wide-scale deployment of wind, solar, advanced bio-fuels, and a modern electric power grid in both countries and cooperate in designing and implementing the policy and technical tools necessary to make that vision possible. Given the combined market size of the two countries, accelerated deployment of renewable energy in The United States and China can significantly reduce the cost of these technologies globally. The two sides welcomed the establishment of The U.S.-China Energy Cooperation Program (ECP), a partnership between government and industry to enhance energy security and combat climate change. The ECP will leverage private sector resources and expertise to accelerate the deployment of clean energy technology. The two sides commended the results of the recently-held Fourth U.S.-China Energy Policy Dialogue andNinth U.S.-China Oil and Gas Industry Forum and welcomed the launch of a U.S.-China Shale Gas Resource Initiative to accelerate the development of unconventional natural gas resources in China. Drawing on recent experience in the United States, this initiative aims to improve energy security in both countries and help China transition to a low-carbon economy. The two sides agreed to work together to advance global efforts to promote the peaceful use of nuclear energy. They welcomed the recently-concluded Third Executive Committee Meeting of the Global Nuclear Energy Partnership, and the commitment of the partnership to explore ways to enhance the international framework for civil nuclear energy cooperation. They agreed to consult with one another in order to explore such approaches -- including assurance of fuel supply and cradle-to-grave nuclear fuel management so that countries can access peaceful nuclear power while minimizing the risks of proliferation.

Coop Good – Energy

**Cooperation with China key to new energy solutions—China has the resources and American cooperation key**

**Jinnette, Lieutenant Colonel, 9**

(James G., Strategy Research Project, “US China Policy: Time for Robust Engagement”, p. 13-14, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA497538) PG

Hand in hand with the shared global **economy, decisions within the realm of energy policy offer unique challenges and phenomenal opportunities for both nations**. **Beijing has an insatiable appetite for resources, because they are foundational to China’s consistent growth**, and its social stability built on this cornerstone growth is **critical to the survival of the Chinese Communist Party.31 Throughout the world, China is on a hunt for energy resources. Its widespread efforts to secure resources, especially o**il, within Central Asia, Africa, and Latin America **are remarkable in scope and planning**. Projecting an exponential rate of growth in oil consumption as its middle class becomes more mobile, China sees resource acquisition as a keystone of its long-term growth strategy. Opportunities exist, however, which go far beyond simple acquisition of resources. Remarkably, **China is horribly inefficient in using the oil it currently has.** Secretary Paulson colorfully pointed out that “if China today were as efficient as the United States was in 1970, it would save the equivalent of 16 million barrels of oil a day, or almost 20 percent of the world’s daily oil consumption.”32 Cong Cao notes that energy cooperation tops the list of areas in which China and the US could join forces for shared benefit. Technologically, **America is uniquely capable of providing expertise to the Chinese government at a time when energy is China’s chief concern. Policy makers chart a clear win-win scenario when cooperative engagements in support of energy initiatives can be seen as methods to strengthen mutual support between two great nations while simultaneously reducing environmental pollution, reducing energy costs, and eliminating potential friction points across the globe. Furthermore, economic partnerships which would spring from such ventures would strengthen both nations.**

Coop Good – Energy, Relations & Economy

Clean energy coop key to broader relations and global economy

China Daily, 1/30/11

[China Daily, “Critical test for Sino-US ties: Clean energy” 1/30/11, <http://rael.berkeley.edu/node/657>, accessed 6/31/11, HK]

"Clean energy cooperation will be a key litmus test of the ability of China and the United States to build a partnership based on mutual needs and opportunities. The outcome is of long-lasting global economic, environmental and geopolitical importance. While quiet cooperation does exist between the two countries in the form of decades of joint work on energy efficiency standards and through a new but under-funded US-China Clean Energy Research Center, far higher profile actions, however, point toward conflict. First, 2009 ended with an unproductive US-China standoff at the Copenhagen Climate Summit. Second was China's rapid scale-up of production and global sales of renewable energy technology - specifically solar panels, wind turbines and batteries for the burgeoning electric vehicle markets. Third are the high-level tensions over Chinese dominance in the production of rare earth metals for advanced electronics. Taken in sum, many see these events the precursors to a "Sputnik Moment" for the US in the race for leadership in the 21st century.However, a far more mutually profitable route exists, one that both nations and the global community need to nurture. If necessity is the mother of invention, cooperation may be the missing father. China's incredible acceleration of production and sales of clean energy technology is the result of necessity. China has become world's largest energy consumer, and while its coal resources are vast - 70 percent of China's energy and 80 percent of its electricity come from coal - no other nation pays as high an environmental cost for energy than does China. China has no other path to continued growth and energy security for its 1.3 billion people than through renewable and energy efficiency. To meet the rising demand, China invested more than $50 billion in clean energy in 2010 alone. To put this in perspective, the Chinese invested twice as much in clean energy as did the US. The US, too, is dependent on coal, for 49 percent of electricity in 2010. Energy is the largest component of US annual imports, with crude oil accounting for only 38.4 percent of the US trade deficit in 2009. Both nations made clean energy investment central to their recent national stimulus plans, and US President Barack Obama has many times linked economic recovery to "green jobs". The two countries critically need each other to build the clean energy economy for the 21st century. China is arguably the most important proving grounds for what clean energy needs most today: scale-up. China needs energy to grow and has a political system that can drive the exponential growth needed to move renewable energy to the center of the global energy system. The US has a nimble and deep research and development system, with the "Silicon Valley Mentality" of serial innovators and entrepreneurs whose wealth creation is the envy of the world. The US also has a huge resource in its capacity for capital market and enterprise management.

Coop Good – Prolif

Space partnerships can benefit counterproliferation goals

Hays, retired Airforce Lieutenant Colonel, 9

(Peter L., senior policy analyst supporting the plans and programs division of the National Security Space Office “Space and Sino-American Security Relations” <http://web.mac.com/rharrison5/Eisenhower_Center_for_Space_and_Defense_Studies/Journal_Vol_2_No_3_files/Space%20and%20Defense%202_3.pdf> SPACE and DEFENSE Volume Two Number Three Winter 2009 accessed: 6/28/11 pg 20-21) TJL

The end of the Cold War removed one important motivation for prestige-based civil space activities and strengthened incentives to pursue cooperative ventures such as the International Space Station (ISS). The United States also had important counterproliferation objectives in employing Russian space scientists in the civil sector as major partners on the ISS effort and lessening their potential to contribute to the weapons market. In addition, development and use of the aerospace workers and industrial base that supports civil and all other space activities are significantly out of phase in the United States and China. The United States has lost 750,000 scientific and technical workers since the end of the Cold War, 60 percent of aerospace industry workers are over age 45 and 25 percent are eligible to retire; by contrast, a large percentage of the Chinese aerospace industry workforce is under age 45 and the Chinese graduate some 351,500 engineers each year, versus about 137,400 engineers graduated from four year engineering programs in the United States.4

Coop Good – North Korea

Coop on North Korea crucial to reducing provocations

Agence France Presse, 6-26-11

(Agence France-Presse, “US asks China to press N.Korea” 6-26-2011 <http://www.google.com/hostednews/afp/article/ALeqM5hCVWLUUUrqsLCV2mr9glZAERCZsQ?docId=CNG.8684d0c4fc022391e25dcc498eda9e5c.e1> , MLF, accessed 6-30-11)

HONOLULU, Hawaii — The United States on Saturday asked China to use its influence on North Korea to prevent a new "provocation," saying that Pyongyang must mend ties with the South if it wants to move ahead. During first-of-a-kind talks between the Pacific powers on Asia-related issues, senior US official Kurt Campbell said he shared views with China on North Korea, which counts on Beijing as its primary source of support. "We've again asked for China to take critical steps to urge North Korea to reach out and to deal responsibly and appropriately with South Korea and to refrain from any further provocations," Campbell told reporters after the talks in Hawaii. North Korea and China have appealed for a resumption of six-nation talks on ending Pyongyang's nuclear program, but the United States has said that it first wants Kim Jong-Il's regime to commit clearly to previous agreements and to lower tension with US-allied South Korea. "We are looking for concrete progress in North-South relations and we believe that that is critical first step towards a larger engagement with North Korea," Campbell said. North Korea last year shelled a civilian area of the South for the first time since the 1950-53 Korean War, killing four, and was accused in the sinking of a South Korean warship that claimed the lives of 46 sailors. China refrained from public criticism of North Korea over the tensions, to the consternation of South Korea and the United States. But South Korean media on Friday quoted the South 's President Lee Myung-Bak as telling lawmakers that China has warned North Korea against further attacks. The Hawaii talks focused largely on rising tension between China and its neighbors in the South China Sea, with the United States urging calm.

US is pushing China to pressure North Korea to create peace on the Korean Peninsula

Ariang News 6-11-11

(Ariang is Korea’s Global News Network: “US: China Should Push N. Korea to Improve Inter-Korean Ties” 6-11-2011 <http://www.arirang.co.kr/News/News_View.asp?nseq=116961&code=Ne2&category=2>, MLF, accessed 6-30-11)

The United States has once again stressed the importance of the two Koreas improving their ties and urged China to use its influence on North Korea to make that happen. State Department spokesman Mark Toner said Friday that Assistant Secretary of State for East Asian and Pacific Affairs Kurt Campbell, who recently visited China and South Korea, asked his counterparts in Beijing to push the North to make progress in repairing inter-Korean relations. And not referring to China by name, he urged "extreme caution" in business dealings with Pyeongyang. The remark came days after China and North Korea broke ground on the Hwanggumphyong and Wihwa Islands joint economic zones along their shared border.

Coop Good – East Asia Peace

US and Chinese cooperation in the East Asian region key to peace in the region

China Daily News 6-24-11

(China Daily News Newspaper: “China, US launch new win-win cooperation platform” 6-24-2011 <http://www.chinadaily.com.cn/opinion/2011-06/24/content_12771662.htm> , MLF, accessed 6-30-11)

The first round of consultations between China and the United States on Asia-Pacific affairs will be held in Hawaii on June 25. Compared to the existing 60-plus consultation mechanisms between the two countries, the Asia-Pacific affairs consultation mechanism appears a little "late." However, it was actually launched at the right time, given the development of China-U.S. relations and the current situation in the region. China and the United States are two world powers facing each other across the Pacific Ocean. They have conducted fruitful cooperation in handling Asia-Pacific affairs and made great contributions to regional peace, stability, and prosperity. During Chinese President Hu Jintao's state visit to the United States this past January, the heads of state of the two countries vowed to follow the trend of the times, and to work together toward a cooperative partnership based on mutual respect and mutual benefit, ensuring that the two countries' cooperation in the Asia-Pacific region will move in the right direction. The United States has long dominated the political, economic, and security landscape of the Asia-Pacific region, while China, as an emerging great power in the region, is bound to play a major role in transforming the landscape. The interests of the two countries in the region overlap to some extent, which has caused friction. The two countries are both located in the Asia-Pacific region, so it is understandable that they have overlapping interests. Proper handling of their overlapping interests will create a significant and positive impact on the regional peace, development and prosperity. The Asia-Pacific region is currently searching for a deep economic integration and is in a period of transforming to a new security pattern. The China-U.S. consultation is the inevitable product of this transitory stage. There are many hot issues in the Asia-Pacific region and regional diversity and complexity is very prominent. China and the United States have common interests and common responsibility in the Asia-Pacific region. This has decided that the two countries can only work together in this region. The China-U.S. consultation on Asia-Pacific affairs is not aimed at "setting the tone" or "setting the direction" for various Asia-Pacific affairs, but rather planning and promoting bilateral cooperation in the Asia-Pacific region through the exchange of views to properly handle related conflicts and differences and form an interaction pattern with rules. China and the United States strengthening mutual trust is the reliable guarantee of the stable development of the Asia-Pacific region. China will strengthen contact with Asia-Pacific countries in various fields along with its rapid economic development and growing strength in order to expand its influence in the Asia-Pacific region. However, China will remain a developing country for a long period of time, and China's development will not constitute a challenge to other countries because China does not have such a strategic will. The peaceful development of the Asia-Pacific region requires a new political, economic and security pattern and the creation of more space for the development of emerging markets, such as China. China and the United States strengthening consultation is conducive to ensure a peaceful interest distribution method of the Asia-Pacific region in the transitory stage and will also help both sides adapt to their exchanges in the new pattern of the future. Some countries in the Asia-Pacific region are concerned about the rise of China. Some traditional allies of the United States still expect it to counterbalance China and their mindsets are understandable. The countries seeking to counterbalance China simply aim to use such a balance to maintain regional peace and stability and maximize interests for their development. The more results the China-U.S. cooperation produces, the more benefits they will receive. None of the countries are willing to face a situation in which they will have to choose which side they will be on, China or the United States. The confrontation between China and the United States is harmful to both sides, because it will not only increase the development costs of both sides, but also lead to the loss of security in the region. As for the entire Asia Pacific region, the peaceful coexistence between China and the United States is beneficial to both sides and all of the parties involved. Therefore, the China-U.S. consultation on Asia-Pacific affairs to be held in Hawaii is of considerable symbolic significance. The island is located in the middle ground between Beijing and Washington D.C. and is around 8,000 kilometers away from both of the two capitals. What a huge area it will be when drawing a circle with Hawaii in the center and with its radius covering both capitals.

\*\*\* Relations Advantage

Relations Low Now – ASATs

China’s ASAT testing produces space debris that threatens the ISS and hurts its international cooperation

Hitchens, Director of World Security Institute’s Center for Defense, 2007

(Theresa, “U.S.-Sino Relations in Space: From ‘War of Words’ to Cold War in Space?” China Security, p. 13-14, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=186>, Accessed June 30, 2011, NS)

What Response Did the Test Elicit from the International Community? Following the test, Britain, Australia, Canada, Japan, Taiwan, India, South Korea and the European Union joined the United States in protesting and calling upon Beijing for consultations – and while China has said it has fulfilled those calls, diplomats from the protesting nations disagree. A Canadian diplomat said that the three démarches made by Canada (at the Chinese Embassy in Ottawa, the Canadian Embassy in Beijing, and China’s representation office to the United Nations in Geneva) have yet been unanswered. Indeed, diplomats are widely bemoaning the lack of communication and transparency regarding the test. Further, considering that Kelso and other space tracking experts say that the latest debris information is showing that at least 51 pieces of the 517 now identified are likely to pass very close (within 10 kilometers) to the International Space Station,31 international concern is only likely to rise rather than fall. Heiner Klinkrad, head of the European Space Agency’s space debris office in Darmstadt, Germany, said (even before the most recent debris catalog release): “Destroying a satellite at this altitude, in sun-synchronous orbit, presents a debris problem about as serious as you can get” and speculated that some debris could remain on orbit for hundreds of years.32 Kelso also pointed out that it is “what we don’t know” with regard to the amount of smaller debris that is the real issue of concern.

Relations Low Now – ASATs

ASAT testing cuts China out of the international sphere – misconduct

Hitchens, Director of World Security Institute’s Center for Defense, 2007

(Theresa, “U.S.-Sino Relations in Space: From ‘War of Words’ to Cold War in Space?” China Security, p. 13-14, Winter, <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=186>, Accessed June 30, 2011, NS)

Because China technically broke no laws, it is hard to imagine that direct economic sanctions are likely to be forthcoming in the near-term. But charges that it is not fully abiding by its responsibilities under the Outer Space Treaty are likely to result in political repercussions. Certainly, Beijing’s position regarding a weapons ban treaty in the Conference on Disarmament in Geneva, and its stature in the Committee for the Peaceful Uses of Outer Space in Vienna, are likely to be seriously undercut. Furthermore, rumors are already circulating that a number of international space meetings scheduled to take place this year in Beijing – such as the April meeting of the Inter-Agency Debris Coordination Committee and the February meeting of the debris subcommittee of the International Standards Organization – may be moved to another locale in protest of the ASAT test. While isolating China on space issues is likely to cause more harm than good, some sort of near-term, short-lived punitive action may be called for in order to demonstrate to the Chinese leadership both the gravity of their misconduct and the fact that the international community is not “toothless” in responding to irresponsible space actors. The more interesting question is what affect, if any, the damage to China’s reputation as a responsible space actor will have on its long-term relationships with its current (and potential) civil and commercial space partners – particularly in Europe. According to China’s White Paper on space, Beijing has a substantial amount of cooperation underway: “Over the past five years, China has signed cooperation agreements on the peaceful use of outer space and space project cooperation agreements with Argentina, Brazil, Canada, France, Malaysia, Pakistan, Russia, Ukraine, the [European Space Agency] and the European Commission, and has established space cooperation subcommittee or joint commission mechanisms with Brazil, France, Russia and Ukraine. It has signed space cooperation memorandums with space organizations of India and Britain, and has conducted exchanges with space-related bodies of Algeria, Chile, Germany, Italy, Japan, Peru and the United States.” Further, “In October 2005, the representatives of China, Bangladesh, Indonesia, Iran, Mongolia, Pakistan, Peru and Thailand signed the Asia-Pacific Space Cooperation Organization (APSCO) Convention in Beijing, and in June 2006 Turkey signed the Convention as well. APSCO will be headquartered in Beijing.”36 And in December 2004, China signed a contract for its first satellite export: it will build and launch a telecommunications satellite for Nigeria.37 For many developing nations, China is likely to continue to be a partner of choice due to China’s eagerness and low prices for launch and satellite production. Likewise, Russia, which has already dedicated itself to cooperation with China on lunar exploration,38 seems to be viewing Sino-Russian space cooperation as yet another tool in a geopolitical game to counterweight to the United States. Therefore, Russian-Chinese space cooperation is more likely to increase than decrease, despite the ASAT test. However, the situation may be different in Europe – where questions about the wisdom of cooperation with China already have been raised for both security and competitive reasons. China’s early participation in the development of the European Union’s Galileo navigation, positioning and timing network has already run into trouble for other reasons, including Europe’s refusal to allow Beijing access to its encrypted signal and China’s decision to pursue its own similar satellite network.39 The U.S. government has further already expressed concern to the U.K. government regarding China’s cooperation with Surrey Satellite Technology Ltd. on the development of Earth observation satellites, including the Disaster Monitoring Constellation that includes Britain’s National Space Center as well as the Nigerian, Algerian and Turkish equivalents.40 China’s ASAT test might serve as a spur for Europe to distance Russia seems to be viewing Sino-Russian space cooperation as yet another tool in a geopolitical game to counterweight to the United States.

Relations Good – Extinction

Sino-U.S. relations are key to solve for human survival

Hays, former Air Force Lieutenant Colonel, 2009

(Peter L., former Air Force Lieutenant Colonel and Associate Director of Eisenhower Center for Space and Defense Studies, “Space and Sino-American Security Relations”, Space Defense: Scholarly Journal of the United States Air Force Academy’s, Volume 2, Number 3, Winter 2009, p.16-17, <http://web.mac.com/rharrison5/Eisenhower_Center_for_Space_and_Defense_Studies/Journal_Vol_2_No_3_files/Space%20and%20Defense%202_3.pdf>, accessed 7/6/11) EK

Addressing four issue areas can help provide context and focus for these concerns: contrasting Chinese and American views of space and comparing the place of space during the Cold War with its role in the current global security environment; reviewing the evolution of security space capabilities and superpower space arms control; evaluating the role of space capabilities in Sino-American security interrelationships, particularly with respect to a potential conflict over Taiwan; and assessing the prospects for a range of possible cooperative ventures and transparency- and confidence-building measures (TCBMs). Defusing space apprehensions will be difficult and there are currently several worrisome trends, but space holds unique potential to help define the Sino-American security relationship and shape the very future of humanity. If Beijing and Washington can work towards resolving or at least lessening space tensions they will not only better manage their overall relationship but also open more opportunities to use space for the benefit of all humanity through pursuit of genuinely cooperative spacepower objectives such as joint science and exploration missions, generating wealth in space, harvesting energy from space, and, ultimately, improving the odds for humanity’s survival by better protecting Earth and creating capabilities to become a multi-planetary species.

Relations Good – Miscalc

Sino-US relations key to overcoming misunderstandings and miscalculations

**Martel, Naval War College professor of national security affairs & Yoshihara, Institute for Foreign Policy Analysis research fellow, 3**

(William C. and Toshi, Autumn 2003, Washington Quarterly, “Averting Sino-US Space Race”, p. 26-27, <http://www.twq.com/03autumn/docs/03autumn_martel.pdf>, accessed: 7/1/11, SL)

In any event, China does not need to reach parity with the United States to harm U.S. interests in space. Some China scholars have argued that China could use a range of old and new technologies, including advanced space capabilities, to weaken the political will of superior adversaries who increasingly depend on space to fight wars.2626 Whether this approach will be successful is debatable, but U.S. vulnerabilities to disruptions in space might embolden China to attack U.S. space systems in the event of a military confrontation over Taiwan. Strategists in the United States and in China are clearly monitoring the other’s developments in space. How the United States judges Chinese intentions and capabilities will determine Washington’s response; of course, the reverse is equally true. As each side eyes the other, the potential for mutual misperceptions can have serious and destabilizing consequences in the long term. In par ticular, both countries’ exaggerated views of each other could lead unnecessarily to competitive action-reaction cycles. What exactly does such an action-reaction cycle mean? What would a bilateral space race look like? Hypothetically, in the next 10 years, some critical sectors of China’s economy and military could become increasingly vulnerable to disruptions in space. During this same period, Sino-U.S. relations may not improve appreciably, and the Taiwan question could remain unresolved. If Washington and Beijing could increasingly hold each other’s space infrastructure hostage by threatening to use military options in times of crisis , then potentially risky paths to preemption could emerge in the policy planning processes in both capitals. In preparing for a major contingency in the Taiwan Strait, both the United States and China might be compelled to plan for a disabling, blinding attack on the other’s space systems before the onset of hostilities. The most troubling dimension to this scenario is that some elements of preemption (already evident in U.S. global doctrine) could become a permanent feature of U.S. and Chinese strategies in space. Indeed, Chinese strategic writings today suggest that the leadership in Beijing believes that preemption is the rational way to prevent future U.S. military intervention. If leaders in Beijing and Washington were to position themselves to preempt each other, then the two sides would enter an era of mutual hostility, one that might include destabilizing, hair-trigger defense postures in space where both sides stand ready to launch a first strike on a moment’s notice. One scenario involves the use of weapons, such as lasers or jammers, which seek to blind sensors on imaging satellites or disable satellites that provide warning of missile launches. Imagine, for example, Washington’s reaction if China disabled U.S. missile warning satellites or vice versa. In that case, Sino-U.S. relations would be highly vulnerable to the misinterpretations and miscalculations that could lead to a conflict in space. Although attacks against space assets would likely be a precursor or a complement to a broader crisis or conflict, and although conflicts in the space theater may not generate many casualties or massive physical destruction, the economic costs of conflict in space alone for both sides, and for the international community, would be extraordinary given that many states depend on satellites for their economic well-being

Relations Good – Trade

US-Sino relations key to trade

Crienglish.com, 11/15/00

[Crienglish.com,“Sino-US Trade and Economic Relations and Technological Cooperation”11/15/00[http://english.cri.cn/811/2006/04/14/199@77695.htm](http://english.cri.cn/811/2006/04/14/199%4077695.htm), accessed 6/31/11, HK]

Since the establishment of diplomatic relations between China and the United States in 1979, the bilateral trade has witnessed fairly rapid growth. Especially in recent years, trade between the two countries has maintained a sound momentum of rapid growth. According to statistics from the Chinese Customs, the two-way trade volume reached US$54.94 billion in 1998, a 12.1% increase over that of 1997. China's exports to the U.S. reached US$37.98 billion, an increase of 16.1%, while China's imports from the U.S. reached US$16.96 billion, an increase of 4.0%. China saw a favorable trade balance of US$21.02 billion in 1998. In the period from January to June 1999, China-U.S. bilateral trade volume totaled US$27.12 billion, increasing by 11.5% over that of the first half of 1998, with China's exports to the U.S. reaching US$18.11 billion, an increase of 8.4%, and China's imports from the U.S. US$9.00 billion. The primary items that China imported from the U.S. were fertilizer, airplanes, chemical products, medical care instruments, etc., while China's exports were mainly textile, clothing, shoes, suitcases and machinery. The U.S. remains as China's second largest trading partner while China continues to be the fourth largest trading partner of the U.S.. China-U.S. bilateral trade, investment,economic and technological cooperation maintained good momentum of development in 2000. According to statistics from the Chinese Customs, the two way trade volume totaled US$74.47 billion, a 21.1% increase over that of 1999. China's exports to the U.S. amounted to US$52.1 billion, an increase of 24.2%, while China's imports from the U.S. reached US$22.36 billion, up 14.5%. China saw a favorable trade balance of US$29.74 billion in 2000. The U.S. remains as China's second largest trading partner while China continues to be the fourth largest trading partner of the U.S.

Coop Solvency – Relations

**Space cooperation is a key first step**

**Thaisrivongs, associate editor at the Harvard International Review, 6**

(David, Harvard International Review, May 6, “New Space for US-China Relations”, <http://hir.harvard.edu/international-trade/the-final-frontier>, accessed 7/2/11) PG

From China's entry into the World Trade Organization to the support it has given to US corporations that tap its resources, China's promising steps suggest it is time for the United States to reduce some of the tariffs stifling economic integration and discouraging business cooperation at many levels. **The United States should welcome China into the group of countries it considers strong allies, disavowing the history of suspicion and escalating standoffs, and accepting China as a partner in a broader, global** **context. Aiding the Chinese space program could be the first key step in launching US-China relations into an era of mutual trust and cooperation.**

Coop Solves Relations – Empirics

Space co-op solves relations – Russia proves

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. 11, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA539619, accessed 6/29/11) EK

While NASA has a diverse history in the realm of international space cooperation, perhaps the most significant is the cooperation with Russia. It is interesting how two countries that were adversaries developed a successful relationship with regard to space cooperation at the peak of the Cold War. In fact, it was these early cooperative efforts between these two countries that paved the way to the modern day success of U.S.-Russia space cooperation. The Cold War cooperative effort that captured the most attention was the Apollo-Soyuz docking in July 1975. Preparation for this event was very challenging, to say the least. Here you had two significantly incompatible space programs and political systems that had to work together in various forums and meetings in order to make this cooperation possible.75 Results of this cooperative effort were much more than just a demonstration to the world that these two Cold War rivals could shake hands in space. The successful docking of the U.S. Apollo and Soviet Soyuz spacecraft demonstrated a common rendezvous and docking mechanism which would allow for possible space rescues, still in use today with the International Space Station (ISS).76 The ISS is a key example of how space cooperation with Russia has been beneficial to the U.S. In February 2003, Russian Soyuz spacecraft were the only means available to travel to and from the ISS for U.S. astronauts following the Columbia space shuttle accident. This reliance on the Russian Soyuz spacecraft to ferry supplies and U.S. astronauts to and from the ISS lasted until NASA shuttle missions resumed in 2005. The U.S. will again be dependent on Russian Soyuz spacecraft when the shuttle program is retired (as currently scheduled) in 2010 until the new Crew Exploration Vehicle (CEV) is available for NASA to use.77 Russian involvement with the ISS began in 1993, when President Clinton added Russia to the international endeavor that already consisted of the U.S., Europe, Japan and Canada.78 Although originally brought onboard partly to encourage compliance with non-proliferation of ballistic missile technology, the Russians proved valuable and quite significant in the international team. In addition to providing a means for spacelift to and from the ISS, the Russians were important during Phase 1 of the ISS development with U.S. involvement on the Mir space station. During Phase 1, Russians flew onboard the space shuttle seven times and on nine occasions the space shuttle docked with Mir.79

Coop Solves Relations – Space Key

Space can save relations with China

Seedhouse,. Ph. D. in aerospace science and FBI consultant, 2010

(Erik, “The New Space Race: China vs. the US” Springer and Praxis Publishing Co., <http://www.scribd.com/doc/31809026/The-New-Space-Race-China-Vs>, accessed: 6/30/11, SL)

ALTERNATIVE FUTURES: COOPERATING WITH CHINA Unpredictable outcomes On certain diplomatic levels, the Sino US relationship is similar to the one that existed between the Soviet Union and the US more than four decades ago. In 1%2. at the height of the Cold War. few would have predicted the possibility of a joint spaceflight, but just 10 years later, a bilateral agreement led to the docking of Soyuz and Apollo spacecrafts. While the Apollo Soyuz Test Program (ASTP) was undoubtedly a significant political and historical event, many analysts still harbored fears about the Soviet Union's ultimate intentions, even after astronaut Thomas Stafford and cosmonaut Alexei Leonov shook hands on July 17th. 1975. Given these suspicions, few would have believed the unprecedented level of cooperation that took place during the Shuttle Mir era between 1994 and 1998. During this timeframe. American astronauts spent nearly 1.000 days living in orbit with Russian cosmonauts onboard the Russian space station. Mir (Figure 9.2). The Shuttle Mir program, which witnessed 10 dockings of the Space Shuttle with Mir. not only prepared the way for the ISS, but began an era of cooperation seldom seen in human history. Less than a decade after the end of the Shuttle Mir program, it was the Russian Soyuz capsule that assured access to space for NASA astronauts following the Columbia accident in 2003. It was an outcome few could have predicted. The point is that it is impossible to predict the future, just as it is impossible to know if or how Sino US relations might develop. The Soviet US lesson has taught us that despite fears about the Soviet Union's intentions, informed decisions were made about how the Soviet Union and the US might cooperate in space. These decisions ultimately resulted in a productive international partnership that served to build confidence between the two nations and advanced space exploration. How-such a level of cooperation and agreement may be achieved between China and the US is as difficult to predict as the ASTP and the Shuttle Mir program, but there are some policies and guidelines that, if followed, may enable such collaboration to be realized. Avoiding u descent into space warfare While the idea of collaborating militarily with the Chinese is a non-starter, the notion of security collaboration has been suggested as a means of moving towards a common interest. One low-level route to collaboration would be to open treaty negotiations with China on the subject of the military use of space. Another option discussed in the left-leaning sections of the blogosphere is to establish rules of the road for space, akin lo the code of conduct that exists at sea. Such an agreement would create special caution and safely areas around satellites, provide notification measures, and restrict actions such as ASAT tests.

Coop Solves Relations – Tech

Technological and scientific cooperation key to relations

Haijun,Xinhua writer, 4/11/11

[Ren, Xinhua writer, Xinhua Net, “U.S.-China S&T cooperation strong part of bilateral relations: Obama's science adviser”4/11/11<http://news.xinhuanet.com/english2010/indepth/2011-04/11/c_13823171.htm>, accessed 6/31/11, HK]

WASHINGTON, April 10 (Xinhua) -- Ahead of the second meeting of the U.S.-China High-Level Consultation on People-to-People Exchange, the top U.S. science adviser spoke highly of the two countries' cooperation in science and technology. "U.S.-China science and technology cooperation remains one of the strongest aspects of our bilateral relationship," John Holdren, science and technology adviser to U.S. President Barack Obama, said in a written interview with Xinhua Thursday. Cooperation in science and technology continues to focus on some of the greatest challenges facing the two countries in the 21st century, such as energy efficiency research to address climate change, he said. The launch of the U.S.-China Clean Energy Research Center, announced jointly by Obama and Chinese President Hu Jintao in November 2009, has provided a telling example of such cooperation with a focus on energy-efficiency buildings, carbon capture and storage technology as well as low emission vehicles, Holdren said. On top of that, the two countries have conducted cooperation in agricultural science and technology, such as agricultural biotechnology, natural resource management, food safety, water conservation, agricultural technology and bioenergy. "Energy and agriculture are just two areas of increased cooperation; we have collaborative activities spanning across many U.S. government agencies," Holdren said. The earliest bilateral deal in science and technology since the normalization of China-U.S. relations dates back to January 1979, when the U.S.-China bilateral Science and Technology Cooperation Agreement was signed along with the establishment of the Joint Commission on Science and Technology Cooperation between the United States and China, he said. "As a result, for over thirty years science and technology have played an active role in promoting bilateral relations between our two countries," he said. Before joining the U.S. government, Holdren committed himself for many years to exchanges on energy technology, environmental science, as well as science and technology policy. Before joining Obama's team, Holdren was a professor working on climate and energy issues at Harvard University, where he led a program on science, technology and public policy. He served on former president Bill Clinton's science advisory team and was former president of the American Association for the Advancement of Science in Washington, where he pushed for more urgent action on global warming. Holdren currently co-chairs the Joint Commission with Chinese Minister of Science and Technology Wan Gang. The duo signed the renewal of the bilateral Science and Technology Agreement during the China-U.S. summit held in Washington in January. "This renewal signifies the continuing commitment of the two countries to maintain and expand the historical emphasis on science and technology cooperation as a mainstay of our relationship," Holdren said. Holdren also recalled his visit to Tongji University in Shanghai, China, last October. "I was struck by the questions and deep interest (shown) by both faculty members and students in science and technology developments in the United States," he said. "This interest -- in fields as diverse as nanotechnology, transportation, clean energy, and climate change -- demonstrates that there continues to be a large role for science and technology cooperation between both countries to tackle some of the greatest challenges that we jointly face in the 21st century," Holdren said.

Coop Solves Relations – Tech

Scientific and technological cooperation key to US-Sino relations and space

China Through a Lens, 3/4/02

[China Through a Lens, “Sci-tech Cooperation: a Win-Win 30-year History Between China and US”3/4/02, <http://www.china.org.cn/english/china-us/27985.htm>, accessed 6/31/11, HK]

Ever since President Richard Nixon’s official China visit in 1972, which opened a new era for Sino-US ties, scientific and technological cooperation, as well as the economic and trade cooperation, have become the most important backbone for Sino-US relations. Scientific and technological cooperation has always been one of the key fields at bilateral summits. On January 31, 1979, Deng Xiaoping signed the Agreement between the US and the Chinese Governments on Cooperation in Science and Technology with President Jimmy Carter during his official visit to the US, launching a very important and promising field for further contacts between the two countries. In July of 1997, Chinese President Jiang Zemin made an official visit to the US,during which the two countries agreed to cooperate in a space-based program for studying the Earth. At the same time, the Energy and Environment Cooperation Initiative between the two countries was signed; In June of 1998, President Bill Clinton visited China, and the two countries reached an agreement on cooperation concerning peaceful uses of nuclear technologies and signed a letter of intent on cooperation concerning urban air quality monitoring network. The Agreement between the US and the Chinese Governments on Cooperation in Science and Technology gives a broad overview of the scientific and technological cooperation between the two countries, and it is renewed every five years. So far, the period of validity for this convention has been extended to April 30, 2006. Based on this convention, the two governments have signed 34 cooperation protocols or memorandums step by step, covering more than 30 fields, including high energy physics, space study, environmental protection, nuclear safety and energy efficiency. This number stands top in terms of the number of cooperation China has signed with other developed countries across the world. To plan and coordinate intergovernmental scientific and technological cooperation, the two countries set up the China-US Joint Commission on Scientific and Technological Cooperation. In the past 20 years or more, the commission has held nine conferences, providing a good dialog channel and negotiation mechanism for the two countries to carry out cooperation in areas of common interest, such as sanitation and health, energy, environment, fundamental research, and industrial technology. Leaders’ support from both sides and the smooth cooperation among governments of the two countries offered very favorable conditions for extensive scientific cooperation. In the past 10 years, the cooperation between Chinese Academy of Sciences and US science and research institutes or universities has reached a substantial stage. The Physics Institute of Chinese Academy of Sciences set up a quantum physics research lab with the US Oak Ridge National Laboratory. The Institute of Computing Technology under the Chinese Academy of Sciences and Texas State Agriculture University established a united laboratory on modern communication technology; and the publication work for the English-version Chinese Plants, which is chaired by the Chinese Academy of Sciences and the Missouri Botanical Garden, and co-edited by many botanists from many counties or institutes, is underway. Prominent achievements have been made in terms of large-scale and comprehensive cooperation between China and US. Officials from the Ministry of Science and Technology indicated that, so far, the two countries have carried out several thousand projects regarding Sino-US scientific and technological cooperation, to which tens of thousand of scientists have given their invaluable contributions. The great achievements realized via Sino-US scientific and technological cooperation cover fundamental research, high technology, civil technology, among which, some of such achievements are leading the world, such as the remote satellite ground station by Chinese Academy of Science, Beijing electron-positron collision project, China digital earthquake network, the discovery of a hitherto unknown spiral-shaped galaxy, substitute technological research for home-use fluorine refrigerators and the production of super energy-saving refrigerators without fluorine, the framework for nuclear safety supervision management regulation and its management methods, a trial factory for electricity generation via circulation of gas, etc. Many American-Chinese Nobel Prize winners such as Tsung-Dao Lee, Chen Ning Yang, Samuel C.C.Ting often hold international academic-exchange seminars and lead research cooperation between the two countries, making great contributions to China’ improvement in her research capacity. As a superpower with the most advanced science and technology, the United Sates has many advantages in many areas. From 1976 to 1999, among 122 Nobel Prize Winners, Americans gained 95. The statistics shows that the expenditure on scientific research and development in the US amounts to US$240 billion, accounting for half of the total scientific research and development expenditure for the seven most developed Western countries.

Coop Key to Relations – Tension

**Chinese space growth necessitates cooperation and dialogue**

**Pace, Director of the Space Policy Institute, 5/11/11**

(Scott - Elliott School of International Affairs, The George Washington University, CQ Congressional Testimony, MILITARY AND CIVIL SPACE PROGRAMS IN CHINA; COMMITTEE: SENATE U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION, Capitol Hill Hearing Testimony, Lexis) AC

Growing Chinese space capabilities have naturally created speculation about future international space cooperation. A recent issue of Aviation Week and Space Technology (April 22, 2011) covered the wide and diverse range of international aerospace cooperation with China, notably in commercial aircraft. Such cooperation includes a full range of U.S. and European suppliers as well as traditional rivals, Boeing and Airbus. The amount and depth of cooperation is even more striking when compared to the minimal level of cooperation in space, even including space and Earth science. The two most recent U.S.China summit meetings include brief joint statements on space (emphasis added): "The United States and China look forward to expanding discussions on space science cooperation and starting a dialogue on human space flight and space exploration, based on the principles of transparency, reciprocity and mutual benefit. Both sides welcome reciprocal visits of the NASA Administrator and the appropriate Chinese counterpart in 2010." Beijing, China - November 17, 2009 "The United States and China agreed to take specific actions to deepen dialogue and exchanges in the field of space. The United States invited a Chinese delegation to visit NASA headquarters and other appropriate NASA facilities in 2011 to reciprocate for the productive visit of the U.S. NASA Administrator to China in (October) 2010. The two sides agreed to continue discussions on opportunities for practical future cooperation in the space arena, based on principles of transparency, reciprocity, and mutual benefit." Washington, DC - January 19, 2011 The 2009 statement was vague regarding who the Chinese counterpart to the NASA Administrator would be as that seems to be unclear even to the Chinese. The China National Space Administration (CNSA) had previously been used as the "civil" interlocutor for space cooperation and it was initially assumed this might hold true for discussions of human space flight. However, the technical capabilities and management of human space missions resides with the PLA and it has not be clear that the CNSA would "add value" to discussions. For the United States, however, it would also seem odd to have a former Marine Corps General (Administrator Bolden) meeting with senior PLA officers if the future for U.S.China militarytomilitary dialogue continues to be as uncertain as it has been. 1 Nonetheless, the NASA Administrator did visit China in October 2010 and the 2011 summit statement said that discussions of practical cooperation would continue on the basis of transparency, reciprocity and mutual benefit. The latter two principles are unremarkable and have been a consideration for all U.S. space cooperation since the beginning of NASA. The principle of transparency is a different consideration and goes to one of the central concerns with all Chinese space activities - a lack of understanding on how decisions are made and what strategic intentions drive them. In large part, such opacity is intentional on the part of Chinese officials. In various discussions, they have expressed their discomfort with even the term "transparency" and preferring other formulations such as "clarity of outcomes" - thus shielding their internal decisionmaking processes. Gaining a better understanding of China's decisionmaking process and strategic intentions remains a central objective and problem for the United States. This applies to civil space cooperation as well as other areas of the relationship. To oversimplify, in the case of the Soviet Union, we knew their intentions as well as their capabilities. China is not the Soviet Union, thankfully, but we may know more about their capabilities than their intentions. It is also possible they may not know themselves, but it is hard to tell even that.

\*\*\* US Soft Power Advantage

US Space Leadership Down – General (1/3)

American leadership in space is slipping- China rising

Laxman, journalist for Asian Scientist, 6/27/11

(Srinivas, AsianScientist, “China’s Space Mission: The Long March To The Moon And Mars Home”, <http://www.asianscientist.com/features/chinas-space-mission-moon-mars/>, 6.30.11, SWolff)

On the 50th anniversary of the first human space flight by Yuri Gagarin, the Chinese government made an announcement which was extremely appropriate for the occasion: it will launch its own space station. This project was already on the cards, but it was formally confirmed during the 50th anniversary celebrations. Called Tiangong (天宫) or Heavenly Palace, the 60-ton space station will be constructed in orbit from a series of modules launched over the next few years. After the initial trials in docking and rendezvous, it will be manned by a three-man crew. The present International Space Station (ISS) weighs 419 tons and generally has a six-man crew or more. For quite some time, the US has been trying its best to include China in the ISS program, but the Chinese response has been lukewarm. The Chinese space station program envisages two spacecraft – Shenzhou-9 and Shenzhou-10 – being launched in 2012, which will dock with the Tiangong-1 module. The Chinese have invited scientists from all over the world to participate in the project, and speculation is rife that a Pakistani scientist could perhaps be one of the earliest guests. Apart from the scientific significance, space scientists feel that the Chinese space station project is endowed with a lot of political and geopolitical ramifications, and is being viewed as a clear challenge to US dominance in space. China’s Space Flight Program: Codenamed Project 921 The space station project is a part of China’s ambitious human space flight program, codenamed Project 921, which incorporates a number of Russian technologies. China already has many launch complexes; some of the important ones are the Jiaquan Launch Center, Taiyuan Launch Center, Xianchang Launch Center, and Newchang Launch Center. China also has a variety of rockets, and the Long March rocket has several versions. The country has laid out a clear and precise trajectory for Project 921. It launched its first manned space flight, Shenzhou-5, in October 2003 with Yang Liwei. The mission was an astounding success. This was followed by Shenzhou-6 in 2005 with a two-man crew, and a third one in 2008 with a three taikonauts (Chinese name for astronauts or cosmonauts), both equally successful. The importance of the third mission was that it included a spacewalk for 14 minutes. Though China is a late entrant to the human space flight program compared to the US and Russia, it has mastered the critical technologies in a short period of time. Experts believe that more taikonauts will be flying to space in the days ahead, and training is already in full progress. 2030: A Chinese Taikonaut On The Moon? Apart from the space station, China is also laying considerable emphasis on missions to the moon, with the ultimate aim of a manned lunar landing around 2030. Named after the Chinese goddess of the moon, China launched its first mission to the moon, Chang’e-1, on October 24, 2007. The mission ended on March 1, 2009 when it was taken out of orbit and impacted on the moon’s surface. Chang’e-1 helped to create an accurate and a high resolution map of the moon’s surface. Only a year later on October 22, 2008, India launched its first mission to the moon, Chandrayaan-1. Asked if India and China were on a race to the moon, ISRO (Indian Space Research Organisation) officials dismiss any suggestions that both the countries were competing with each other. “There is absolutely no rivalry and in fact we would like to collaborate,” remarked an ISRO official who declined to be identified. With the US human space flight program in limbo due to the policies of the Obama administration, it is clear that China is set to become a world leader in this field – a move that may not only have political and scientific value, but also military significance. Like its space station project, China has made clear and precise plans for its lunar program too, which some feel India can emulate as well. Three years after the launch of Chang’e-1, China launched its second moon mission, Chang’e-2 on October 1, 2010, as a follow-on to Chang’e-1. Chang'e-2 (嫦娥二号), China's second moon orbiter (Source: Xinhua). The flight of Chang’e-2 was a technological breakthrough: it successfully completed the earth-moon cruise in just five days instead of 12. The mooncraft conducted research from an altitude of 100 km above the moon’s surface as a preparation for a soft landing by China’s third lunar mission, Chang’e-3, tentatively slated for lift off in 2013. On June 8, 2011, Chang’e-2 completed its mission and departed from the lunar orbit, zooming into interplanetary space to test Chinese tracking and control network. The third and fourth lunar missions, Chang’e-3 and Chang’e-4, will have a lander and rover. They will form part of the second phase of the Chinese

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US Space Leadership Down – General (2/3)

**[CARD CONTINUED, NO TEXT REMOVED]**

lunar exploration program. These will be followed by Chang’e-5 in 2017, which will be a sample return mission. Chang’e-5 will carry a drilling machine to obtain a sample of the moon rock from a depth of two meters and bring it back to earth. China Eyes The Red Planet Wang Yue (王跃), Chinese taikonaut (Source: Mars-500). China’s space plans

do not focus only on human space flights and the moon, because it has set its sights on the Red Planet as well. Currently, its space scientists are working on the country’s first unmanned Mars exploration mission between 2014 and 2033, and possibly even a manned landing on Mars during the 2040-2060 period. Notably, in the Mars500 project, which is being conducted at a facility outside Moscow, it is a Chinese candidate, Wang Yue (王跃), who is topping the list in performance. The program is a simulated human landing on Mars, and the entire mission lasts for 500 days. Besides manned landings on both the Moon and Mars, the Chinese space goals are also to: Build a long term earth observation systems. Set up an independent satellite telecommunication network. Provide commercial launch services. Establish remote sensing systems. With the Chinese government fully backing the space program, China is likely to accomplish these goals, since it also considers these milestones to be an extension of the nation’s technological capabilities and foreign policy. If India does not pick up speed with its human space flight program, Indian space scientists feel that the country’s program may be overtaken by China’s.

Other nations are matching our space technology now

Sabathier and Bander, Center for Strategic and International Studies Senior Associates, 9

(Vincent and Ashley, Senior Associates with the Center for Strategic and International Studies, “Foreign Policy Opportunities for NASA,” Commentary, March 9, 2009, http://csis.org/publication/foreign-policy-opportunities-nasa, accessed 7/7/11, JSkoog)

Under the current system, the U.S. industry has been confined to competing and cooperating mostly with itself, a little bit like Soviet aerospace companies during the Cold War. Because of this, people working in the U.S. space industry have had less opportunity to update their skills and knowledge, American companies have had fewer opportunities for benchmarking, and the products from these workers and companies are less compatible with items made outside the United States. Space capabilities in other parts of the world now come close to matching—in some cases, maybe even exceeding—American space capabilities. Much has been written about how damaging the overly stringent export controls have been to U.S. aerospace companies, especially to lower tier companies that do not have enough business within the ITAR wall and that are going out of business one by one. Little is written or said, however, about the development of foreign technologies and capabilities. Is it ITAR-induced ignorance or denial? Either way, this situation has not improved national security, and to some extent has triggered a downward spiral of paranoia.

US Space Leadership Down – General (3/3)

America is the only remaining challenge to Chinese space leadership.

Adams, Correspondent for the Christian Science Monitor, ’10

(Jonathan Adams, The Christian Science Monitor, “China is on path to 'militarization of space'; The Asian space race is moving along slowly, but steadily - and China is in the lead, with technology that could give it a military advantage over the US,” 28 October 2010, LexisNexis, 7.1.11, SWolff)

China looks set to pull ahead in the Asian space race to the moon, putting a spacecraft into lunar orbit Oct. 6 in a preparatory mission for an unmanned moon landing in two or three years. Chinese engineers will maneuver the craft into an extremely low orbit, 9.5 miles above the moon's surface, so it can take high-resolution photos of a possible landing site. Basically, China is looking for a good "parking space" for a moon lander, in a less-known area of the moon known as the Bay of Rainbows. The mission, called Chang'e 2 after a heroine from Chinese folklore who goes to the moon with a rabbit, highlights China's rapidly growing technological prowess, as well as its keen desire for prestige on the world stage. If successful, it will put China a nose ahead of its Asian rivals with similar lunar ambitions - India and Japan - and signal a challenge to the American post-cold-war domination in space. The Asian space race Compared with the American and Soviet mad dashes into space in the late 1950s and '60s, Asia is taking its time - running a marathon, not a sprint. "All of these countries witnessed the cold war, and what led to the destruction of the USSR," says Ajey Lele, an expert on Asian space programs at the Institute for Defense Studies and Analysis in New Delhi, referring to the military and space spending that helped hasten the decline of the Soviet regime. "They understand the value of money and investment, and they are going as per the pace which they can go." But he acknowledged China's edge over India. "They started earlier, and they're ahead of us at this time," he says. India put the Chandrayaan 1 spacecraft into lunar orbit in 2008, a mission with a NASA payload that helped confirm the presence of water on the moon. It plans a moon landing in a few years' time, and a manned mission as early as 2020 - roughly the same timetable as China. Japan is also mulling a moonshot, and has branched out into other space exploration, such as the recent Hayabusa mission to an asteroid. Its last lunar orbiter shared the moon with China's first in 2007. Both Japan's and India's recent missions have been plagued by glitches and technical problems, however, while China's have gone relatively smoothly. Mr. Lele said the most significant aspect of the Chang'e 2 mission was the attempt at a 9.5-mile-high orbit, a difficult feat. India's own lunar orbiter descended to about 60 miles in 2008, he said, but was forced to return to a more stable, 125-mile-high orbit. A low orbit will allow for better scouting of future landing sites, said Lele. "They [the Chinese] will require huge amounts of data on landing grounds," said Lele. "A moon landing hasn't been attempted since the cold war." During the famed 1969 Apollo 11 manned mission to the moon, astronaut Neil Armstrong had to take control of the lander in the last moments of descent to avoid large moon boulders strewn around the landing site. China hopes to avoid any such last-minute surprises with better reconnaissance photos, which would allow them to see moon features such as rocks as small as one-meter across, according to Chinese media. Is China's space exploration a military strategy? Meanwhile, some have pointed out that China's moonshot, like all space programs, has valuable potential military offshoots. China's space program is controlled by the People's Liberation Army (PLA), which is steadily gaining experience in remote communication and measurement, missile technology, and antisatellite warfare through missions like Chang'e 2. The security implications of China's space program are not lost on India, Japan, or the United States. The Pentagon notes that China, through its space program, is exploring ways to exploit the US military's dependence on space in a conflict scenario - for example, knocking out US satellites in the opening hours of a crisis over Taiwan. "China is developing the ability to attack an adversary's space assets, accelerating the militarization of space," the Pentagon said in its latest annual report to Congress on China's military power. "PLA writings emphasize the necessity of 'destroying, damaging, and interfering with the enemy's reconnaissance ... and communications satellites.' " More broadly, some in the US see China's moon program as evidence that it has a long-range strategic view that's lacking in Washington. The US has a reconnaissance satellite in lunar orbit now, but President Obama appears to have put off the notion of a manned return to the moon. With China slowly but surely laying the groundwork for a long-term lunar presence, some fear the US may one day find itself lapped -"like the tale of the tortoise and the hare," says Dean Cheng, an expert on China's space program at the Heritage Foundation in Washington. "I have to wonder whether the United States, concerned with far more terrestrial issues, and with its budget constraints, is going to decide to make similarly persistent investments to sustain its lead in space."

US Soft Power Low – Coop Key

US soft power is low now- only cooperation with China on space will put us on the right track

**Imran, Masters candidate at Universidade Nova de Lisboa 2010**

(Mara, “China's space program : a new tool for PRC "soft power" in international relations?” accessed:7-01-11, <http://run.unl.pt/handle/10362/5473> pg 91-92)TJL

With the rise of China’s presence in both space and space-related commercial services, and their growth of space-derived soft power internationally, American interests, political, economic, and otherwise, are sure to be impacted. In a recent Air and Space Power Journal, Trevor Brown notes: The problem for the United States is that other nations believe it seeks to monopolize space in order to further its hegemonic dominance...[;] Poor U.S. diplomacy on the issue of space weaponization contributes to increased geopolitical backlashes of the sort leading to the recent decline in U.S. soft power…which, in turn, has restrained overall U.S. national power despite any gains in hard power.318 Focusing on the general decline of U.S. soft power and global influence, he adds, “Due to U.S. losses of soft power, the international community now views with suspicion any legitimate concerns that the United States may have about protecting critical assets in space”.319 Looking at current U.S. space policy and strategy, what choices does Washington make to encourage or restrain China’s rise? What can America do differently to rebuild its own soft power? This final section examines that issue and offers recommendations for U.S. space policy

**Coop Solves – Leadership**

US-Sino cooperation in space preserves US diplomatic leadership while promoting a more cooperative international sphere- sitting on the sidelines is not an option

**Imran, Masters candidate at Universidade Nova de Lisboa, 10**

(Mara, “China's space program : a new tool for PRC "soft power" in international relations?” accessed:7-01-11, <http://run.unl.pt/handle/10362/5473> pg 102-103)TJL

America has shown the rest of the world far too much edgy “hard power” diplomacy, including in the space realm. In doing so, it has isolated itself and thereby harmed its own security. Especially with regard to China, the United States is in danger of mischaracterizing the motivations and rationales behind China’s space program and, as a result, pursuing counterproductive policies that could actually create incentives for other countries to side with China against American interests in space. We have already seen a drop in U.S. dominance in commercial space and the rise of ITAR-free programs as a result of U.S. insecurities about technology transfer. The Chinese ASAT test is usually seen as a military test purely designed as an asymmetric capability to attack America’s overdependence on space assets, normally in the context of a Sino-U.S. wartime scenario (i.e., over Taiwan).351 But as China expands its number of military and civilians satellites and thereby incurring the same space-borne liabilities as the U.S., why is it not also vulnerable to a space attack? Bottom line, as Johnson-Freese argues, “…other countries are clearly interested in working with China on space, regardless of the American stance. Therefore, the United States can either be involved and retain some measure of control through leadership, or watch from the sidelines”.352 It is time for America to shift permanently away from hegemonic ambitions in space, dismantle the idea of space-based weapons and space control, and instead turn towards promoting space cooperation through peaceful projects that can truly serve mankind and preserve the heritage of space as a sanctuary.353 U.S. have no longer monopoly on space technology, and U.S. lead is precariously slipping away in commercial space. If Washington avoids inflammatory rhetoric and demonstrates a sincere willingness to usher in a new era of space cooperation, taking care to build in adequate verification and compliance mechanisms, the rest of the world will follow our lead. For the sake of U.S. own interests and long-term security, sitting on the sidelines is not an option.

Coop Solves – Soft Power

NASA will lose primacy – no strong NASA officials

Sabathier and Bander, Center for Strategic and International Studies Senior Associates, 9

(Vincent and Ashley, Senior Associates with the Center for Strategic and International Studies, “Foreign Policy Opportunities for NASA,” Commentary, March 9, 2009, http://csis.org/publication/foreign-policy-opportunities-nasa, accessed 7/7/11, JSkoog)

Overly stringent export controls, however, are not the whole of the problem. While space capabilities were developing worldwide, NASA stuck only to the International Space Stations (ISS) international cooperation mode. Recent NASA leadership decided to ignore domestic and international capabilities alike to focus its effort on a new national space transportation system, resulting in additional self-isolation.3 Although international cooperation is incorporated in the very laws that define NASA, these policy and programmatic choices have prevented the U.S. government from making use of civil space as an extraordinarily valuable foreign policy tool—from exercising smart power through space. Just as a number of issues have contributed to the growing isolation of the U.S. space industry, a number of things need to happen to address the problem. In addition to ITAR reform, there is leadership. A NASA administrator must be appointed, and soon. Someone who is respected internally is vital, of course, so that the agency is not stalled in these critical times. Someone who is also respected on the international space scene would send the right signal right away. Further, a NASA administrator who makes U.S. leadership a priority, in cooperation with a new National Space Council and the secretary of state, will help strengthen existing international relationships, and possibly build new ones. Engagement at a policy level is needed to break NASA out of its isolation. Further, the decisions that the new administrator makes about future exploration will have international implications. Many of our partners are anxious to see what the United States will decide to do. And although the decisions about export controls will be made elsewhere in the U.S. government, the NASA administrator might lend an important voice. It is time to secure future U.S. leadership in space, and for that, we need a leader quickly.

Space Exploration Good – US Leadership

US space exploration signals leadership to the rest of the world

Sabathier, Center for Strategic and International Studies Technology and Public Policy Program Senior associate, and Faith, Center for Strategic and International Studies Space Initiatives adjunct fellow, 8

(Vincent G., G. Ryan, senior associate with the CSIS Technology and Public Policy Program, independent technology consultant and Adjunct Fellow for Space Initiatives at the Center for Strategic and International Studies CSIS, Center for Strategic and International Studies, “Smart Power Through Space”, 2008, p.3, <http://csis.org/files/media/csis/pubs/080220_smart_power_through_space.pdf>, accessed 7/6/11, HK)

While a simple increase in the level of national support is a clear signal of our interest in broader engagement and a commitment to a rational balance between all of our soft and hard power activities, it also creates an opportunity for a compelling display of U.S. global leadership. A highly visible commitment to civil space exploration and utilization will restore U.S. credibility and allow the United States to assume its traditional global leadership role. More generally, space exploration is a high-payoff, low-risk opportunity for U.S. leadership—in no case has a significant expenditure of political capital in support of civil space activities failed to provide high returns on investment. The most spectacular returns from space exploration have been cases where the initial engagement, and consequently the visibility of U.S. leadership, has been the greatest. Yet even in cases where a given space initiative fell short of expectations, virtually no penalty was incurred. As we approach the 35th anniversary of the retreat from the lunar surface we must carefully balance our priorities—neither neglecting pressing problems at home nor forgetting future generations. A stable balance between the short and long term and between hard and soft power is contingent in large measure on increased support for civil space operations. Over the longer term, we should strongly consider supporting our civil space activities at a minimum of 1 percent of the federal budget, with a long-term goal of supporting our space program at the rate of 25 cents per American per day. Although it would be sufficient to simply increase funding and aspire to more ambitious goals, an excellent way to augment this effort, restore U.S. leadership credibility, and make the most effective use of space as an instrument of soft power is for the United States to reach out and engage the entire world in areas such as remote sensing, space tracking, and space exploration. Such a leadership initiative will be best focused by promoting short-term and longer-term

Space Exploration Good – Soft Power

US space exploration boosts soft power

Sabathier, Center for Strategic and International Studies Technology and Public Policy Program Senior associate, and Faith, Center for Strategic and International Studies Space Initiatives adjunct fellow, 8

(Vincent G., G. Ryan, senior associate with the CSIS Technology and Public Policy Program, independent technology consultant and Adjunct Fellow for Space Initiatives at the Center for Strategic and International Studies CSIS, Center for Strategic and International Studies, “Smart Power Through Space”, 2008, p.3, <http://csis.org/files/media/csis/pubs/080220_smart_power_through_space.pdf>, accessed 7/6/11, HK)

The attractiveness of space is due, in large measure, to its reflection of the strongly American inspirational values of hope, optimism, and enthusiasm for people all around the world. During the political turmoil of the 1960s, Apollo served as a beacon of hope and a counterpoint to the increasingly unpopular VietnamWar. This contrast illustrates the challenge of balancing hard and soft power priorities. More people cite the successes of the space program as the greatest accomplishment of the U.S. government during the twentieth century than they do maintaining peace, ending the Cold War, and winning World War II combined. However, much of the public perception of space exploration is firmly rooted in an often-romanticized perception of the Apollo era—a poll on the 20th anniversary of the Moon landing showed that more than 80 percent of respondents felt that the Apollo missions were worth the cost (Harris, July 1989). However, support for the Apollo program during the space race only briefly exceeded 50 percent (Harris, July 1969). Past support for space exploration was never as high as it is currently believed to have been, and public support for human exploration of the Moon is now much higher than it was during the height of the space race. In much the same way that the Apollo program and VietnamWar era were then the two most visible displays of soft and hard power, we are now faced with a similar situation. Throughout the entire Cold War, support for soft and hard power use of space was carefully balanced. We must now signal to the world that we are not a nation that lives by use of military force alone. We must increase our support of civil space utilization and exploration to bring it back in line with spending on military and intelligence applications of space.

Space Exploration Good – Soft / Hard Power

US space exploration key to soft power, which bolsters hard power

Sabathier, Center for Strategic and International Studies Technology and Public Policy Program Senior associate, and Faith, Center for Strategic and International Studies Space Initiatives adjunct fellow, 8

(Vincent G., G. Ryan, senior associate with the CSIS Technology and Public Policy Program, independent technology consultant and Adjunct Fellow for Space Initiatives at the Center for Strategic and International Studies CSIS, Center for Strategic and International Studies, “Smart Power Through Space”, 2008, p.1, <http://csis.org/files/media/csis/pubs/080220_smart_power_through_space.pdf>, accessed 7/6/11, HK)

The United States is particularly well suited to make very effective use of space as an instrument of soft power for a number of reasons. First, as the CSIS Commission on Smart Power notes, the United States is the only global nation, and the expansion of the human sphere of influence into space is indisputably a global undertaking. Second, the successes and challenges of space exploration, from the Moon landing to the harrowing Apollo 13 mission, are dramatic examples of key American characteristics such as hope, enthusiasm, and optimism. Third, unlike other countries, U.S. civilian space activities have always been explicitly kept apart from the national security space activities of the defense and intelligence communities. However, space is a unique field of endeavor in which virtually no technology, practice, or technique is inherently limited in its application to the exercise of either hard or soft power. Nearly all space activities are, either directly or consequentially, axiomatically dual use. Therefore, a more active civilian space program can ultimately bolster the underlying infrastructure and technology needed to support hard power applications. Attempts to isolate a national space program can foster the development of broad indigenous capabilities, in much the same way that an arms embargo can encourage the rapid development of a robust national defense industrial base. International cooperation in civil space applications makes the costly independent pursuit of dual-use capabilities much less attractive to other nations. Since the fall of the Berlin Wall and the subsequent emergence of the United States as the sole global nation, activity in space has changed drastically.

\*\*\* Solvency – ISS Mechanism

ISS – China Excluded Now (1/2)

China has no part in the ISS right now

Denny, retired US Naval Officer, Master in Science and Space Studies, 8

(Bart L., retired U.S. Naval Officer, continue my interest in the national security arena, Associate's Degree in Nuclear Technology, a Bachelor's Degree in Economics and Political Science, finished a Master of Arts in National Security Studies. , “international cooperation in human spaceflight: lessons learned from Russian participation in the international space station project,” bartdenny.com, <http://www.bartdenny.com/iss-lessons-learned.html>) KA

There are two puzzles surrounding U.S. regulatory policies on space technology exports to China. First, among the major space faring nations, China is the only country that the United States has excluded from its space cooperation strategy. Europe and Japan have benefited greatly from their space cooperation with the United States. The former director of the Centre National d’Etudes Spatiales (CNES) even referred to CNES as a little baby of NASA. In the former Eastern Bloc, the United States has adopted an engagement policy and allowed for the establishment of a joint launcher with Russia and Ukraine to canvass businesses worldwide. This policy kills two birds with one stone. Not only does it reap the business benefits intrinsic in the advanced rockets of the former Soviet Union, but also highlights the security benefits of preventing space technology proliferation. The Iron Curtain is gone and the East and West have been cooperating, with the International Space Station (ISS) acting as an important symbol. However, there is no trace of Chinese participation in this international project. The second puzzle is that despite this blockade by the United States, China’s space capabilities have improved tremendously with regards to manned space missions and satellite exportation. Conversely, the United States, though it is the implementer of sanctions, finds its own share of the commercial satellite market falling continuously. The ISS, advocated by the United States, has been in dire straits, mainly due to the breakup of the Columbia Shuttle. In the face of these conundrums, the Chinese people cannot help but inquire: Why is the United States isolating only China? And why has this policy of isolation produced precisely the opposite of its intended result? Is the United States blocking China or has it put shackles on itself? Should the current policy be continued? This paper will make a brief review of these issues.

China is involved in most space ventures except the ISS due to its lack of communication and transparency

Seedhouse,. Ph. D. in aerospace science and FBI consultant, 2010

(Erik, “The New Space Race: China vs. the US” Springer and Praxis Publishing Co., <http://www.scribd.com/doc/31809026/The-New-Space-Race-China-Vs>, accessed: 6/30/11, SL)

China has signed cooperative space agreements with several countries, including Britain. Canada. France. Pakistan. Russia, and Brazil. For example. China has a cooperative agreement with the University of Surrey Space Centre in Great Britain, which markets microsatellites to perform scientific missions such as Earth surveillance. Needless to say, the Sino Surrey alliance has not received the approval of the US. which is understandably concerned that microsatellite technology could be easily modified for ASAT purposes. Furthermore, the Sino Surrey association has caused some concerns among politicians in Britain: "There is no doubt about this: Surrey has put China into the space weapons business. I am very alarmed. I am particularly concerned because China seems to be right in the middle of nuclear proliferation, passing technology to North Korea, which helps other rogue states such as Iraq and Libya. This may seem like something far away from home. But it directly affects our own national security. This is all happening under the government that promised us ethical foreign policy. What we have goi is no foreign policy." British Shadow Defense Secretary, lain Duncan Smith (February, 2001)

**[CARD CONTINUES]**

ISS – China Excluded Now (2/2)

**[CARD CONTINUED, NO TEXT REMOVED]**

Despite all its cooperative space agreements, the international cooperation most coveted by the Chinese is inclusion in the ISS venture. The ISS (Figure 9.1) is important to Beijing as much for its political aspects as for its technical utility. Chinese participation in the ISS program would not only be a signal to the international community that China had been accepted into the global family of spacefaring nations, but also serve as a seal of legitimacy for the government in Beijing. One reason for China's non-inclusion is that the international consortium of ISS partners arc expected to contribute financial support, provide technological expertise, or both and. until very recently. China had neither. Another,

more powerful reason for keeping the Chinese out in the cold is Beijing's appalling human rights abuses - a legacy that doesn't fit well with the ISS program that has demonstrated that countries can peacefully work together. However, human rights issues arc not the only obstacles to cooperation.

ISS – China Says Yes (1/4)

China wants space cooperation with the ISS

Branigan, China correspondent for The Guardian, 4/26/11

(Tania, “China unveils rival to International Space Station”, The Guardian, <http://www.guardian.co.uk/world/2011/apr/26/china-space-station-tiangong>, accessed 6/30/11) EK

John Logsdon, a Nasa adviser and former director of the Space Policy Institute at George Washington University, said China's plans would give it homegrown expertise in human space flight. "China wants to say: 'We can do everything in space that other major countries can do,'" he said. "A significant, and probably visible, orbital outpost transiting over most of the world would be a potent political symbol." But Wang Wenbao, director of the China Manned Space Engineering Office, told a news conference: "Considering past achievements and the bright future, we feel the manned space programme should have a more vivid symbol, and that the future space station should carry a resounding and encouraging name. "We now feel that the public should be involved in the names and symbols, as this major project will enhance national prestige and strengthen the national sense of cohesion and pride." Jiang added that China aimed to increase international exchanges, and that the hardware from the current rendezvous and docking project is compatible with the International Space Station. "We will adhere to the policy of opening up to the outside world," he said. "Scientists of all countries are welcome to participate in space science experimental research on China's space station." China hopes to make its first moon landing within two years and to put an astronaut on the moon as early as 2025.

[NOTE: Jiang = Professor Jiang Guohua from the China Astronaut Research and Training Centre

China wants to work with the U.S. on the ISS but an invitation has yet to be extended

Hoffman 7

(Michael, staff editor at Daily Tech, Daily Tech, “China wants to join International Space Station Project”, 10/16/7, <http://www.dailytech.com/article.aspx?newsid=9290>, accessed 6/30/11, CW)

Chinese space officials today announced the country is still willing to work alongside the United States on extraterrestrial endeavors, especially the International Space Station. "We sincerely hope to conduct cooperation with the United States in the field of space," said Li Xueyong, Vice Minister of Space and Technology. "At some point we hope to take part in the activities relating to international space stations." Sixteen nations are currently involved in the ISS project, but China is not one of them even though the country has one of the fastest growing space programs in the world. China would ultimately like to have an astronaut stationed on the ISS in the future, but must convince the United States and other partners to allow a communist nation to be allowed to participate in the project. Li did not clearly specify how China hopes to help the participating nations work on the ISS. State media in China reported the country plans to launch its first lunar probe before November, only weeks after Japan launched one into orbit. In 2003, China became the third nation to successfully launch an astronaut into orbit with no help from other nations. There is growing concern over the country's expanding space program, which reached a new level after China announced it had destroyed an old satellite last January by shooting a land-based missile to destroy it. Critics of the launch claim China could theoretically launch a missile to destroy active military satellites, though Chinese officials still claim the nation has only peaceful plans for space.

ISS – China Says Yes (2/4)

China’s plans for a space station are not meant to rival the ISS but to become a part of it

Cyranoski, Asia-Pacific correspondent at Nature Publishing Group, 11

(David, Scientific American, “China Unveils Its Space Station”, 5/4/11, <http://www.scientificamerican.com/article.cfm?id=china-unveils-its-space-station>, accessed 6/30/11. CW)

The International Space Station (ISS) is just one space-shuttle flight away from completion, but the construction boom in low-Earth orbit looks set to continue for at least another decade. Last week, China offered the most revealing glimpse yet of its plans to deploy its own station by 2020. The project seems to be overcoming delays and internal resistance and is emerging as a key part of the nation's fledgling human space-flight program. At a press briefing in Beijing, officials with the China Manned Space Engineering Office even announced a contest to name the station, a public-relations gesture more characteristic of space programs in the United States, Europe and Japan. China first said it would build a space station in 1992. But the need for a manned outpost "has been continually contested by Chinese space professionals who, like their counterparts in the United States, question the scientific utility and expense of human space flight", says Gregory Kulacki, China project manager at the Union of Concerned Scientists, headquartered in Cambridge, Massachusetts. "That battle is effectively over now, however, and the funds for the space station seem to have been allocated, which is why more concrete details are finally beginning to emerge." Significantly smaller in mass than the ISS and Russia's Mir space station (see 'Rooms with a view'), which was deorbited in 2001, the station will consist of an 18.1-metre-long core module and two 14.4-metre experimental modules, plus a manned spaceship and a cargo craft. The three-person station will host scientific experiments, but Kulacki says it also shares the broader goals of China's human space program, including boosting national pride and China's international standing. The space-station project will unfold in a series of planned launches over the next ten years. Last Friday, official state media confirmed that the Tiangong 1 and Shenzhou 8 unmanned space modules will attempt a docking in orbit later this year, a maneuver that will be crucial for assembling a station in orbit. If that goes well, two manned Shenzhou craft will dock with Tiangong 1 in 2012. China will then move on to proving its space laboratory capabilities, launching Tiangong 2 and Tiangong 3, which are designed for 20-day and 40-day missions, respectively, over the next 3 years. Finally, it will launch the modules that make up the station. Observers describe the program as slow, systematic and cautious. According to the Chinese media, engineers have made more than 170 technical modifications to China's Long March rocket in preparation for the next series of launches. "As China is now really venturing into terra incognita with this stage of its manned space program, the unknowns and risks are greater," says Eric Hagt, director of the China program at the Center for Defense Information in Washington DC. Hagt says that the station's small size is partly the result of advances in miniaturization since Mir and the ISS were designed and partly because China "needs to be economical and has stressed that all along. China has studiously avoided the impression that it is in a race, particularly with the United States." China has said that its space technology will be compatible with that used in the ISS so that modules from other countries could dock with its station, and it promises that its facility will be able to host experiments from non-Chinese researchers. But the US Congress, fearing industrial espionage, has long opposed any role for China in the ISS. As a result, the Chinese space program has had no alternative but to "go it alone", says Joan Johnson-Freese, an expert on national security and on China at the US Naval War College in Newport, Rhode Island. Last week's announcement came just two weeks after the passage of a 2011 US federal spending bill that explicitly prohibits NASA from collaborating with China.

ISS – China Says Yes (3/4)

**China wants to cooperate—especially on the ISS**

**David, Insider Columnist, 11**

(Leonard, space.com, “China Ambitious Space Station Goals”, March 7, <http://www.space.com/11048-china-space-station-plans-details.html>) PG

**Regarding space cooperation, Jiang said China intends to strengthen exchanges with other countries in the field of space science research and applications. He explained that the rendezvous and docking project hardware is compatible with the International Space Station. “We will adhere to the policy of opening up to the outside world,” Jiang emphasized**. “We think some space scientific experiment items will be collected and selected from countries of the world which will promote [international exchanges and cooperation](http://www.space.com/10775-national-space-security-strategy-reaction.html)**. Scientists of all countries are welcome to participate in space science experimental research on China’s space station.**” Jiang also spotlighted Wang Yue, an instructor at the China Astronaut Research and Training Center. Wang is one of the six crew members for the [Mars-500 international experiment](http://www.space.com/10760-virtual-space-mock-mars-mission-arrives-red-planet.html) now under way in Moscow — a simulated Red Planet expedition testing the human physical and psychological strains on a 500-day journey to Mars.

[Note - \*Jiang Guohua, a professor and chief engineer at the China Astronaut Research and Training Center in Beijing]

China wants to join the ISS

**Sato,** science and health researcher, 07

(Rebecca, The Daily Galaxy, “Will China Join the International Space Station?” 8-19, <http://www.dailygalaxy.com/my_weblog/2007/10/will-china-boar.html>, 6-30-11, GJV)

China is hoping to join an international space station project, a government official announced recently. he International Space Station (ISS) was launched on November 20, 1998 to begin its first 92-minute trip around the Earth. The first permanent crew of astronauts arrived on the ISS on November 2, 2000. Since then, there have always been at least two people on board. So far, the astronauts residing on the space station have been American or Russian.

China wants to join the ISS in the future

**Sato,** science and health researcher, 07

(Rebecca, The Daily Galaxy, “Will China Join the International Space Station?” 8-19, <http://www.dailygalaxy.com/my_weblog/2007/10/will-china-boar.html>, 6-30-11, GJV)

China is looking to expand its reach into space. Among other reasons, the country sees it as a way to validate claims of being a world leader in the realm of science. Currently, China does not participate in the International Space Station, mostly due to US pressure to keep the communist dictatorship out. Earlier this week, state-run newspapers said China will launch its first lunar probe later this month, only weeks after rival Japan successfully sent their own lunar satellite into orbit. "We hope to take part in activities related to the international space station," Li Xueyong, a vice minister of science and technology. "If I am not mistaken, this program has 16 countries currently involved and we hope to be the 17th partner." A reporter had asked whether China in the future would be competing or cooperating with America in space. Li said China wanted to cooperate with the United States, but would not give any specifics. Back in 2003, China launched its first manned space mission, making it the third country to send a human into orbit on its own, after Russia and the United States. But China caused grevious concern and alarm amid the international community earlier this year when thet blasted an old satellite into fragments with a land-based anti-satellite missile. It was the first such test ever conducted by any nation. The missile testing was widely criticized for its military implications. A similar rocket could be used to shoot military satellites out of space. It could also create a dangerous maze of space debris.

ISS – China Says Yes (4/4)

China is interested in joining the ISS

Whitesides, Astrobiologist, 07

(Loretta Hildago, Wired Science, “China Wants to Partner on the International Space Station,” 8-18, <http://www.wired.com/wiredscience/2007/10/china-wants-t-1/>, 6-30-11, GJV)

Li Xueyong, a vice minister of science and technology, said Tuesday: "We hope to take part in activities related to the international space station. If I am not mistaken, this program has 16 countries currently involved and we hope to be the 17th partner." According to the story, a reporter had asked Xueyong whether China would be more likely to compete or cooperate with America in space. He replied that China wanted to cooperate with the United States. Given the tensions in the air at the moment especially in the wake of the [Chinese anti-satellite test](http://www.wired.com/science/space/news/2007/01/72563), it is a critical time for the United States to begin to engage its fellow space faring nation. It is also important for China to take responsibility for creating a cloud of debris that threatens any nations space operations.

China wants to join the ISS

Radar Daily Staff, 07

(RadarDaily, “China Hopes To Join International Space Station Project,” 8-17, <http://www.radardaily.com/reports/China_Hopes_To_Join_International_Space_Station_Project_999.html>, 6-30-11, GJV)

China hopes to become the 17th nation joining the International Space Station (ISS) project, Vice Minister of Science and Technology Li Xueyong said on Tuesday. "China sincerely wants to cooperate with the United States in [spaceexploration](http://www.radardaily.com/reports/China_Hopes_To_Join_International_Space_Station_Project_999.html) and join the International Space Station project that has already involved 16 nations," said Li, a delegate to the 17th National Congress of the Communist Party of China (CPC), on the sidelines of the event. The Chinese government has been pursuing a policy of peaceful use of airspace, Li said. The International Space Station is a joint project of 16 nations including the United States, Russia, Japan, Canada, Brazil and 11 countries from the European [Space Agency](http://www.radardaily.com/reports/China_Hopes_To_Join_International_Space_Station_Project_999.html). The station's first segment, the Zarya control module, was brought to orbit by a Russian Proton rocket in November 1998 to provide the infant station's battery power and fuel storage. The station is located in orbit around the Earth at an altitude of approximately 360 kilometers, a type of orbit usually termed as low [Earthorbit](http://www.radardaily.com/reports/China_Hopes_To_Join_International_Space_Station_Project_999.html). Due to the ISS, there is a permanent human presence in space, as there have always been at least two people on board the station since the first crew entered it on Nov. 2, 2000. China will soon launch its first circumlunar satellite as part of its ambitious moon exploration program enters the stage of implementation. Development of the satellite, called Chang'e I after the legendary Chinese goddess Chang'e who flew to the moon, and the carrier Long March 3A has been completed after numerous tests.

ISS – ESA Says Yes

The ESA supports China’s inclusion into the ISS

Jia and Dingding, China Daily, 10

(Chen and Xin, China Daily staff writers, China Daily, “China may become space station partner,” 6-1, <http://www.chinadaily.com.cn/china/2010-06/01/content_9914843.htm>, 6-30-11, GJV)

BEIJING - The European Space Agency (ESA) supports China's inclusion in the International Space Station (ISS) partnership, the agency's director -general Jean-Jacques Dordain said on Monday. He made the remarks on Monday during the ongoing Global Lunar Conference in Beijing, which is organized by the International Astronautical Federation and the Chinese Society of Astronautics. Dordain said international cooperation on space exploration has been progressing slowly. To achieve more, the partnership needs to be expanded, he said. "I am really willing to support the extension of the partnership of the ISS to China and South Korea. Obviously, this should be a decision by all partners, not the decision by one partner," he said. The ISS is jointly built and run by the United States, Russia, ESA's 11 member countries, Canada, Japan and Brazil. China is excluded from the ISS. But with growing power based on its independent technological development, China is being invited to more international cooperatives in space exploration in recent years. Dordain noted that he was glad to see that on June 3, the first Russian, Chinese and ESA group will participate in the Mars-500 mission.

The ESA wants China to join the ISS

Long, Writer for SpaceDaily, 01

(Wei, SpaceDaily, “ESA To Help China Join ISS,” 7-29, <http://www.spacedaily.com/news/china-01zr.html>, 6-30-11, GJV)

China may gain access to the International Space Station (ISS) with the help of the European Space Agency (ESA), the Hong Kong-based pro-Beijing newspaper Wen Wei Po reports today (July 28). The newspaper discloses that ESA and the Chinese space agency China National Space Administration (CNSA) have reached "an intention to collaborate" towards admitting China to the ISS project in the near future. According to unnamed sources, ESA will discuss and set the timeline during its ministerial level Council meeting in November in Edinburgh, U.K. The news comes only five days after the newspaper reports that the next unmanned test flight of the Shenzhou manned spacecraft, the Shenzhou-3 mission, would likely take place shortly. As a founding member of the multinational project, ESA's assistance would give China a huge boost to participate in the international space project. On Dec. 27 last year Chinese Minister of Science and Technology Zhu Lilan announced an initiative which would expand China's international scientific cooperation. Among the goals in the initiative is joining the ISS project.

ISS – ISS Says Yes

China could provide a useful partner in the ISS

Rhian, assistant editor at AmericaSpace, 11

(Jason, has degrees in public relations and journalism and completed a NASA ESMD internship, freelance contributor at Space.com, freelance journalist at Interspace News, public relations Director at Omega Envoy – Earthrise Space Inc., Writer and Moderator at Spacevidcast, Universe Today, “Can China enter the international space family?”, January 10, <http://www.universetoday.com/82368/can-china-enter-the-international-space-family/>, accessed 6/30/11, CW)

China is only the third nation (behind Russia and the United States) to have a successful manned space program, having launched its first successful manned space flight in 2003. This first mission only had a single person onboard, and gave the world a new word – ‘taikonaut’ (taikong is the Chinese word for space). The country’s next mission contained two of these taikonauts and took place in 2005. The third and most current manned mission that China has launched was launched in 2008 and held a crew of three. Yang Liwei became the first of China's Taikonaut when he rocketed into orbit in 2003. Photo Credit: Xinhua China has steadily, but surely, built and tested capabilities essential for a robust manned space program. Considering that China very ambitious goals for space this would seem a prudent course of action. China has stated publically that they want to launch a space station and send their taikonauts to the moon – neither of which are small feats. China currently utilizes its Shenzhou spacecraft atop the Long March 2F booster from their Jiuquan facility. However, if China wants to accomplish these goals, they will need a more powerful booster. This has been part of the reason that the U.S. has been hesitant to include China due to concerns about the use of what are known as dual-use technologies (rockets that can launch astronauts can also launch nuclear weapons). Both China's rocket and spacecraft are derived from Soviet Soyuz designs. Photo Credit: Xinhua/Wang Jianmin Some have raised concerns about the nation’s human rights track record. It should

be noted however that Russia had similar issues before being included in the International Space Station program. “In the early 1990′s, some at NASA thought having Russian cosmonauts on

the Space Shuttle would mean giving away trade secrets to the competition,” said Pat Duggins, author of the book Trailblazing Mars. “It turned out Russian crew capsules saved the International Space Station when the Shuttles were grounded after the Columbia accident in 2003. So, never say never on China, I guess.” Duggins is not the only space expert who feels that China would make a good companion when mankind once again ventures out past low-Earth-orbit. “One of the findings of the Augustine Commission was that the international framework that came out of the ISS program is one of the most important. It should be used and expanded upon for use in international beyond-LEO human space exploration,” said Dr. Leroy Chiao a veteran of four launches and a member of the second Augustine Commission. “My personal belief is that countries like China, which is only the third nation able to launch astronauts, should be included. My hope is that the politics will align soon, to allow such collaboration, using the experience that the US has gained in working with Russia to bring it about.” Not everyone is completely convinced that China will be as valuable an asset as the Russians have proven themselves to be however. “It is an interesting scenario with respect to the Chinese participation in an international effort in space. The U.S. has made some tremendous strides in terms of historical efforts to bridge the gap with the Russians and the results have been superb,” said Robert Springer a two-time space shuttle veteran. “The work that has resulted in the successful completion of the International Space Station is an outstanding testimony to what can be done when political differences are set aside in the interest of International cooperation. So, there is a good model of how to proceed, driven somewhat by economic realities as well as politics. I am not convinced that the economic and political scenario bodes well for similar results with the Chinese. It is a worthwhile goal to pursue, but I am personally not convinced that a similar outcome will be the result, at least not in the current environment.”

ISS – Other Countries Say Yes

Russia and the E.U. already support ISS co-operation with China

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 58-59) EK

There is in fact a relatively straightforward way to engage China in the ISS, while initially reducing the threat of technological espionage. In 2010, reports surfaced that the Russian Federal Space Agency had initiated discussions with their Chinese counterparts on using the Chinese Shenzhou vehicles as backups for the Russian Souyuz spacecraft, which will be the only means to ferry crews to the station moving forward. 173 Although the discussions amounted to nothing, the idea presented is a viable first step. By allowing China to shuttle international astronauts to the ISS in their own spacecraft, the fear of technology espionage would be greatly reduced, while still allowing China to gain prestige by being an official contributor. This could provide a gateway to expanded cooperation if deemed beneficial and successful. The support of other international partners would need to be sought, which may be challenging for countries like Japan given political animosities, yet Russia is already a close space partner with China and the E.U. has expressed their willingness to invite China in as an ISS contributor. 174 Pursuing this path would likely resonate well with China’s leadership because it is a clear sign that the U.S. is not trying to prevent or complicate China’s rise as a spacefaring nation and is willing to initiate actions to build communication and trust.

Russia wants China to participate in the ISS

Foust, Aerospace Analyst, Journalist and Publisher, 03

(Jeff, The Space Review, “China, Shenzhou, and the ISS,” 8-20, <http://www.thespacereview.com/article/53/1>, 7-1-11, GJV)

One area of speculation about the future of China’s human spaceflight program is what role, if any, China could play in the International Space Station. “We hope the time when we will cooperate in manned flights, including within the ISS project, is not too far off,” Alexander Kaleri, a Russian cosmonaut and member of the ISS Expedition 8 crew, [said in a press conference](http://www.reuters.co.uk/newsArticle.jhtml?type=scienceNews&storyID=3635566&section=news) a day before his own launch on Saturday. A Chinese role in the ISS had always been discussed previously as a hypothetical possibility, given an apparent mutual lack of interest by both Chinese and American officials. Now, though, that China has its own independent means to reach the station, is it time to reexamine the issue?

ESA wants China to co-operate on the ISS

Jia and Dingding, China Daily, 6/1/10

(Chen and Xin, reporters for China Daily, “China may become space station partner”, China Daily, <http://www0.chinadaily.com.cn/china/2010-06/01/content_9914843.htm>, accessed 6/30/11) EK

BEIJING - The European Space Agency (ESA) supports China's inclusion in the International Space Station (ISS) partnership, the agency's director -general Jean-Jacques Dordain said on Monday. Dordain said international cooperation on space exploration has been progressing slowly. To achieve more, the partnership needs to be expanded, he said. "I am really willing to support the extension of the partnership of the ISS to China and South Korea. Obviously, this should be a decision by all partners, not the decision by one partner," he said. Chen Qiufa, vice-minister of industry and information technology in charge of the lunar exploration mission, said at the conference that China is willing to join international cooperatives, and share technologies and research results with other countries, while independently developing its own technologies. In past years, China and ESA have cooperated in a number of projects. In the SMART-1 mission that ended in September 2006 with a spacecraft sent to the moon, the ESA has provided China with details of the spacecraft's position and transmission frequencies. China, in turn, agreed to carry a bio sample for the ESA on the Shenzhou-VIII spacecraft, which will be launched next year, Xinhua reported last year. In addition to lunar exploration, China and the ESA have also cooperated in a few projects in Earth observation missions, including the Double Star Program and Dragon Program. "I think China's partnership with the EU is the most smooth in international cooperation and competitions," Peng Jing, a senior engineer of China Academy of Space Technology, told China Daily on Monday.

ISS – Solves Small Steps Key

The US should take small steps when with China – they’re not reliant on our technology

Wolf, Defense Technology Correspondent at Reuters, 2011

(Jim, “Analysis: Space: a frontier too far for U.S.-China cooperation”, Reuters, <http://www.reuters.com/article/2011/01/02/us-china-usa-space-idUSTRE7010E520110102>, January 2, Accessed July 3, 2011, NS)

Proponents of cooperation say even symbolic steps, such as hosting a Chinese astronaut on the International Space Station, might help win friends in Beijing and blunt hard-liners. Gregory Kulacki, China project manager for the Union of Concerned Scientists, a group often at odds with U.S. policy, said cooperation would be more of a political project than a technical one. "We need to get past the idea that the Chinese need us more than we need them," he said.

ISS – Solves Cost And Satellites

Costs would go down for the U.S. and China could improve their satellites if China was part of the ISS

Denny, retired US Naval Officer, Master in Science and Space Studies, 8

(Bart L., retired U.S. Naval Officer, continue my interest in the national security arena, Associate's Degree in Nuclear Technology, a Bachelor's Degree in Economics and Political Science, finished a Master of Arts in National Security Studies. , “international cooperation in human spaceflight: lessons learned from Russian participation in the international space station project,” bartdenny.com, <http://www.bartdenny.com/iss-lessons-learned.html>) KA

China is at a low point in terms of commercial satellite launches. It has been excluded from this market for six years. During the 1990s, China’s commercial satellite launch services flourished. Between 1990 and 1998, it sent 29 foreign satellites into space on behalf of more than 10 countries and regions. This accounted for seven-to-nine percent of the market and made China the third largest rocket supplier in the world. American satellite makers were the main partners of the China Great Wall Industry Corporation (CGWIC). After the U.S. government banned satellite exports to China, however, Chinese launch companies’ supplies were cut off and CGWIC Suddenly had no satellites to launch. From that point through 2005, CGWIC has not launched a single foreign satellite. Europe and Japan have largely stepped in to capture the market share made available after China’s withdrawal. The business activities of Chinese satellite operators were also affected. There are two important cases which illustrate the gravity of these losses. The first is that of China Satellite Communications Group Corporation (CSCGC), which signed a satellite purchase contract with Loral in 1997 for the ChinaSat 8 satellite. Under the contract, Loral was to build the satellite, while CGWIC was to use its Long March rocket to put it into orbit. However, the U.S. government was unwilling to issue a launch permit, with the result that ChinaSat 8 has been in storage ever since. CSCGC has suffered heavy losses as a consequence. Apart from the $130 million spent to purchase the satellite, it has also lost service revenue of over $300 million. A second example is the case of the Apstar 5 satellite, acquired by the Hong Kong-headquartered APT Satellite Holdings Limited (APT). For identical reasons, the launch date for Apstar 5 has been postponed time and again. The direct result of this has been a decline in orders and the loss of customers for APT. For example, SingTel, an important customer of APT, has reduced the number of leased transponders from 15 to six. Apstar-1A, which is to be replaced by Apstar 5, has also seen its lease rate fall. Furthermore, as supplementary facilities have long been left idle, operating costs have increased. APT has built a completely new 50,000-square-foot satellite testing and control center along with a 125,000-square-foot telecommunication port, but because Apstar 5 cannot be put into space, the time taken to return the investment on these infrastructure facilities has been greatly extended. Finally, China has been excluded from international space cooperation projects, such as the ISS, in part because of the difficulties relating to ITAR. As a result, the cost of its space research is higher, as there are fewer opportunities for China to learn from scientific exchange and the advanced management experience of developed nations through multilateral cooperation.

ISS – Solves Security Concerns & Costs

Letting China co-operate on the ISS would be secure and easy to implement

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 58-59) EK

Finally, the U.S. could be more accommodating to Chinese participation in cooperative international ventures, the most prominent example being the International Space Station (ISS). Given China’s thirst for prestige, the Chinese government would likely be eager to cooperate and may even be willing to increase transparency or engage in military space discussions in return for becoming a member of the ISS. For the U.S., the ISS would serve as a medium to cooperate with China in what is essentially neutral territory and in an international setting whereby mutual suspicions may be tempered. If for nothing else, the idea of a Chinese and American astronaut working in tandem onboard the ISS may give a renewed public desire for space cooperation. Part of the resistance to this move so far has, among other things, been fears of exposing China to new and advanced space technology. Yet, considering the U.S. is reducing its role in the ISS and will be relying solely on Russian spacecraft for transportation, valued U.S. space technology may not necessarily be at risk. There is in fact a relatively straightforward way to engage China in the ISS, while initially reducing the threat of technological espionage. In 2010, reports surfaced that the Russian Federal Space Agency had initiated discussions with their Chinese counterparts on using the Chinese Shenzhou vehicles as backups for the Russian Souyuz spacecraft, which will be the only means to ferry crews to the station moving forward. 173 Although the discussions amounted to nothing, the idea presented is a viable first step. By allowing China to shuttle international astronauts to the ISS in their own spacecraft, the fear of technology espionage would be greatly reduced, while still allowing China to gain prestige by being an official contributor. This could provide a gateway to expanded cooperation if deemed beneficial and successful. The support of other international partners would need to be sought, which may be challenging for countries like Japan given political animosities, yet Russia is already a close space

partner with China and the E.U. has expressed their willingness to invite China in as an ISS contributor. 174 Pursuing this path would likely resonate well with China’s leadership because it is a clear sign that the U.S. is not trying to prevent or complicate China’s rise as a spacefaring nation and is willing to initiate actions to build communication and trust.

ISS – Solves Transparency

China in the ISS is advantageous – multiple ways

Foust, Aerospace Analyst, Journalist and Publisher, 03

(Jeff, The Space Review, “China, Shenzhou, and the ISS,” 8-20, <http://www.thespacereview.com/article/53/1>, 7-1-11, GJV)

While the US has been cool to the idea of adding China to the ISS project, Hitchens noted that bringing the Chinese into the project could be advantageous in a number of ways. “If you bring China into the ISS,” she said, “the United States will have a little more transparency about their capabilities, their programs, what they want to do.” Adding partners to the ISS project for geopolitical reasons is not without precedent, Hays noted. “At least initially the Russians were brought on board as a counterproliferation measure,” he said. “Russia would live up to the Missile Technology Control Regime and other counterproliferation measures, and have their aerospace engineers employed on a more benign venture, like the space station.” Besides the geopolitical issues, there may be pragmatic reasons for adding the Chinese to the ISS. “They have technical capabilities to bring to the table,” Hitchens said. “With the current issue with the shuttle, adding backup vehicles for bringing astronauts up and down from the station might not be a bad idea.”

ISS – Solves Coop

ISS integration solves cooperation

Martel and Yoshihara, The Center for Strategic and International Studies and the Massachusetts Institute of Technology, 3

(William C. Martel is a professor of national security affairs at the Naval War College in Rhode Island. Toshi Yoshihara is a doctoral candidate at the Fletcher School of Law and Diplomacy, Tufts University, and a research fellow at the Institute for Foreign Policy Analysis in Massachusetts., “Averting a Sino-U.S. Space Race” The Washington Quarterly 26.4 (2003) 19-35, <http://muse.jhu.edu/journals/washington_quarterly/v026/26.4martel.html>, Accessed July 1, 2011, EJONES)

On the international stage, the United States should encourage Chinese participation in the International Space Station (ISS). Because China's manned space program is primarily based on Russian designs and technologies, it can easily be made compatible and interoperable with the ISS, which relies on many Russian components. This international venture could also tap into China's less costly and increasingly reliable launching services. Moreover, the Challenger space shuttle tragedy (and the May 2003 landing of the Russian Soyuz capsule that had been missing for several hours) has painfully underscored the need to have redundant capabilities for launching humans into space. Thus, involvement of China's manned space program makes sense for the future of the ISS as well. More broadly, giving China a stake in this global endeavor would reinforce the value of cooperation in space for international security while satisfying Beijing's quest for national pride.

The US should involve China in the development of the ISS

Abbey and Lane, former head of the Johnson Space Center and former Assistant to the President on Science and Technology Policy, 9

(George and Neal, American Academy of Arts and Sciences, “United States Space Policy: Challenges and Oppurtunities Gone Astray”, p.34-35, <http://carnegie.org/fileadmin/Media/Publications/PDF/spaceUS.pdf>, accessed 6/30/11)

**Encourage participation in a restructured human space exploration initiative by other federal agencies, the university community, and scientists in other nations —including the U.S.’s ISS partners but expanded to include all interested coun- tries, such as China.** China has joined the United States and Russia in having the capability to fly human beings in space, and **China is planning for its own space station.** As Susan Eisenhower has outlined, the benefits to the United States of cooperation in space with Russia and of working with it and the other international partners on the ISS, could be extended by making China a partner on the ISS, thus encouraging and turning China’s aspirations in space toward cooperation and the peaceful use of space.48As a prelude to such discussions, **the United States should initiate discussions with China on the use of a common docking system that would enhance and enable space rescue missions.** The successful docking system used for the ISS is an enhancement of the system developed and demonstrated on the Apollo-Soyuz mission of July 1975. We understand that both the United States and China have strategic national security interests in space. But, in our view, **the peaceful uses of space should be the ultimate goal of both nations, and the surest way to achieve that objective is to begin serious discussions on cooperative scientific and human space- exploration activities that the two countries, in cooperation with other nations, can plan and carry out in the coming decades**. In the short term, NASA’s deep-space human spaceflight efforts can be rapidly redirected from the moon and Mars to focus again on the ISS and on science and the technical issues related to energy and the environment by placing greater emphasis on research on Earth and in low-Earth orbit, including enhanced satellite Earth-observation systems. **At the same time, NASA can—and should—plan, with international partners, including the present ISS partners and China, for a truly visionary cooperative space exploration program beyond Earth orbit. Such a program would serve to inspire the next generation of engineers and explorers as we seek new and challenging frontiers in space.**

ISS – Solves Relations (1/4)

ISS solves relations

Broniatowski, Faith, and Sabathier, Center for Strategic and International Studies, 2006

[D. A., G. Ryan, Vincent G, Center for Strategic and International Studies, Human Space Exploration Initiative “The Case for Managed International Cooperation in Space Exploration” , 2006, Pages 1-2 <http://csis.org/files/media/csis/pubs/060918_managed_international_cooperation.pdf> , accessed 7/8/11, HK]

The ISS program, along with most international civil space endeavors, carries with it an element of diplomatic cachet and control. The participation of other nations in the program increases the diplomatic influence of participating na-tions and, therefore, the diplomatic utility derived from cooperation. In general, the more countries participate, the higher will be the utility. Nevertheless, not all countries are equal, and their individual utility value depends on world politics. For example, the utility of having Russia join the ISS program increased significantly after the breakup of the Soviet Union, when relations with a new Russia were at the forefront of United States foreign policy. To the extent that a symbol of cooperation with a given nation is valuable, utility will be delivered. As such, Indian participation in joint space exploration would send a strong signal to the world of good U.S.-Indian relations. This would simultane-ously increase Indian prestige by demonstrating their technological prowess. Similarly, Chinese participation in joint space exploration would signal growing cooperation between the two nations. The use of the ISS for a partnership between either of these nations would drastically increase its utility to those who support friendly relations. On the other hand, those who oppose closer U.S. relations with India or China are likely to oppose their entrance into the ISS program or into any other joint space exploration program. These diplomatic incentives may come at a cost for the cooperating nations; for example, China would likely have to make concessions in the form of more stringent tech-nology export controls and/or better observance of human rights standards. If space exploration is successfully used as a diplomatic tool to exert such “soft power,” its utility increases in proportion to the degree that it is successful in implementing a policymaker’s agenda. Similarly, the departure of a particular nation (or, if the United States chooses to cease participating, of all nations) will reduce U.S. utility to the extent that the aggregate symbol of cooperation is valued.

ISS – Solves Relations (2/4)

Access to the ISS can be a useful tool for Sino-US diplomacy, it alleviates tensions

Branigan and Sample, Chinese correspondent and science correspondent, 11

(Tania and Ian, The Guardian Co UK, “China unveils rival to International Space Station”, April 26, <http://www.guardian.co.uk/world/2011/apr/26/china-space-station-tiangong>, accessed 6/30/11, CW)

It has often been called a ‘100 billion boondoggle’ – yet it is also unquestionably one of the most successful international programs in human history. The International Space Station (ISS) is just now starting to produce some of the valuable science that was the station’s selling point from the beginning. However, this delay can be attributed to the numerous tragedies, economic woes and other issues that have arisen on a global scale through the course of the station’s construction. The one thing that the world learned early on from the ISS experience is that space is a great forum for diplomacy. One time arch-rivals now work side by side on a daily basis. With much of the nations of the world talking about stepped-up manned exploration efforts it would seem only natural that the successful model used on the space station be incorporated into the highly-expensive business of manned space exploration. If so, then one crucial player is being given a hard look to see if they should be included – China. Will we one day see Chinese taikonauts working alongside U.S. astronauts and Russian cosmonauts? Only time will tell. Photo Credit: NASA “International partnership in space exploration has proven its worth over the last decade. It would be a positive step if the other space-faring nation of the world, China, were to join the assembled space explorers of humankind as we march outward into the solar system,” said former NASA Space Shuttle Program Manager Wayne Hale who writes a popular blog about space matters.

ISS Solves

Broniatowski, Faith, and Sabathier, Center for Strategic and International Studies, 2006

[D. A., G. Ryan, Vincent G, Center for Strategic and International Studies, Human Space Exploration Initiative “The Case for Managed International Cooperation in Space Exploration” , 2006, Pages 1-2 <http://csis.org/files/media/csis/pubs/060918_managed_international_cooperation.pdf> , accessed 7/8/11, HK]

International cooperation is valuable to a given nation in that it tends to increase political sustainability. Within the United States, a program is made safer from cancellation to the extent that Congress and the administration are not willing to break international agreements. Indeed, the integration of Russia into the ISS program may well have saved the program from cancellation (consider that the year before Russia was introduced as a partner, the ISS was saved by one vote in Congress). Once cooperation has commenced, canceling a program becomes inconsistent with political sustainability as long as the utility cost associated with the loss of diplomatic benefits and the negative effects on reputation of terminating an international agreement is larger in magnitude than the utility cost that must be paid to maintain the system. In the case of the ISS, international cooperation does provide a rationale for sustaining the pro-gram, because canceling the program would result in a net loss in utility. The corollary to this is that there is a high cost to be paid by any nation that chooses to unilaterally withdraw from an existing cooperative endeavor. This cost comes in the form of damage to the departing nation’s reputation or credibility. In general, any unilateral action sends a signal that the actor is an unpredictable and therefore an unreliable and possibly disrespectful partner. This tends to sabotage the possibility of future cooperation. As such, there is a long-term benefit to maintaining cooperation, even 3 when the immediate cost may seem to call for terminating it. If cooperation has never occurred (as is the case be-tween China and the United States), the advent of cooperation is a significant event, likely delivering a lot of diplo-matic utility.

ISS – Solves Relations (3/4)

ISS key to solve U.S.-Sino relations – Russia proves

Rhian, volunteer and former intern for NASA, 1/10/11

(Jason, “Can China enter the international space family?”, Universe Today, <http://www.universetoday.com/82368/can-china-enter-the-international-space-family/>, accessed 6/20/11) EK

The one thing that the world learned early on from the ISS experience is that space is a great forum for diplomacy. One time arch-rivals now work side by side on a daily basis. With much of the nations of the world talking about stepped-up manned exploration efforts it would seem only natural that the successful model used on the space station be incorporated into the highly-expensive business of manned space exploration. If so, then one crucial player is being given a hard look to see if they should be included – China. Will we one day see Chinese taikonauts working alongside U.S. astronauts and Russian cosmonauts? Only time will tell. “International partnership in space exploration has proven its worth over the last decade. It would be a positive step if the other space-faring nation of the world, China, were to join the assembled space explorers of humankind as we march outward into the solar system,” said former NASA Space Shuttle Program Manager Wayne Hale who writes a popular blog about space matters. China currently utilizes its Shenzhou spacecraft atop the Long March 2F booster from their Jiuquan facility. However, if China wants to accomplish these goals, they will need a more powerful booster. This has been part of the reason that the U.S. has been hesitant to include China due to concerns about the use of what are known as dual-use technologies (rockets that can launch astronauts can also launch nuclear weapons). Both China's rocket and spacecraft are derived from Soviet Soyuz designs. Some have raised concerns about the nation’s human rights track record. It should be noted however that Russia had similar issues before being included in the International Space Station program. “In the early 1990′s, some at NASA thought having Russian cosmonauts on the Space Shuttle would mean giving away trade secrets to the competition,” said Pat Duggins, author of the book Trailblazing Mars. “It turned out Russian crew capsules saved the International Space Station when the Shuttles were grounded after the Columbia accident in 2003. So, never say never on China, I guess.” “One of the findings of the Augustine Commission was that the international framework that came out of the ISS program is one of the most important. It should be used and expanded upon for use in international beyond-LEO human space exploration,” said Dr. Leroy Chiao a veteran of four launches and a member of the second Augustine Commission. “My personal belief is that countries like China, which is only the third nation able to launch astronauts, should be included. My hope is that the politics will align soon, to allow such collaboration, using the experience that the US has gained in working with Russia to bring it about.”

ISS – Solves Relations (4/4)

ISS offers the best solvency for relations

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 58-59) EK

Finally, the U.S. could be more accommodating to Chinese participation in cooperative international ventures, the most prominent example being the International Space Station (ISS). Given China’s thirst for prestige, the Chinese government would likely be eager to cooperate and may even be willing to increase transparency or engage in military space discussions in return for becoming a member of the ISS. For the U.S., the ISS would serve as a medium to cooperate with China in what is essentially neutral territory and in an international setting whereby mutual suspicions may be tempered. If for nothing else, the idea of a Chinese and American astronaut working in tandem onboard the ISS may give a renewed public desire for space cooperation. Part of the resistance to this move so far has, among other things, been fears of exposing China to new and advanced space technology. Yet, considering the U.S. is reducing its role in the ISS and will be relying solely on Russian spacecraft for transportation, valued U.S. space technology may not necessarily be at risk. There is in fact a relatively straightforward way to engage China in the ISS, while initially reducing the threat of technological espionage. In 2010, reports surfaced that the Russian Federal Space Agency had initiated discussions with their Chinese counterparts on using the Chinese Shenzhou vehicles as backups for the Russian Souyuz spacecraft, which will be the only means to ferry crews to the station moving forward. 173 Although the discussions amounted to nothing, the idea presented is a viable first step. By allowing China to shuttle international astronauts to the ISS in their own spacecraft, the fear of technology espionage would be greatly reduced, while still allowing China to gain prestige by being an official contributor. This could provide a gateway to expanded cooperation if deemed beneficial and successful. The support of other international partners would need to be sought, which may be challenging for countries like Japan given political animosities, yet Russia is already a close space partner with China and the E.U. has expressed their willingness to invite China in as an ISS contributor. 174 Pursuing this path would likely resonate well with China’s leadership because it is a clear sign that the U.S. is not trying to prevent or complicate China’s rise as a spacefaring nation and is willing to initiate actions to build communication and trust.

ISS – Solves Innovation

Inviting China into the ISS would signal to other cooperating countries that the ISS is outdated

Sabathier and Faith senior associate with the CSIS Technology and Public Policy Program and president of consulting for public and private aeronautics policy, 2011

(Vincent G., G. Ryan Faith, “U.S. Leadership, International Cooperation, and Space Exploration,” CSIS, p. 4, <http://csis.org/files/media/csis/pubs/060426_us_space_leadership.pdf>, April 26, accessed July 6, 2011, NS)

Another option for the United States is to forge additional partnerships in space with India and China. Efforts are underway with India but should not be overstated. The United States could allow the Chinese to dock at the ISS, showing the current partners that the ISS is passé and that if they do not want to get left behind with a relatively pedestrian project, they had better get on board with a return to the moon. Then the ISS would again serve its original goal of leadership and foreign policy and could allow space exploration to go on.

ISS – Solves Laundry List (1/3)

US-Chinese cooperation in space would revitalize the ISS, draw the line between China's military and civilian program, increase transparency, and would significantly boost relations

**Imran, Masters candidate at Universidade Nova de Lisboa, 10**

(Mara, “China's space program : a new tool for PRC "soft power" in international relations?” accessed:7-01-11, <http://run.unl.pt/handle/10362/5473> pg 87-89)TJL

If the United States truly wants to engage China in a positive and productive manner regarding space, this perspective argues that Washington needs to see China as a potential partner and not just as “rival” or “competitor.” As Nicolas Peter notes, “…few if any countries in the world today can stand alone in space activities, demonstrating therefore the importance of cooperation”.307 Although Washington continues to snub Beijing’s request to serve as a partner on the ISS, there may be some actual merit to allowing China to participate in the program. One obvious benefit would be China’s ability to participate financially and allow for some cost-sharing. With its large foreign reserves and sovereign wealth fund, China is in a better position than other ISS participants (e.g., Brazil, Italy) to help offset some of the continual development and sustainment costs. Another potential benefit in Chinese collaboration would be greater insight and transparency into China’s own space program and technical capabilities. Richard Fisher, vice president of the International Assessment and Strategy Center, offered a slightly puzzling, pessimistic argument in favor of denying Chinese participation in the ISS, as follows: When we look to our own potential future cooperation, dialogue, space dialogue with China, we have to keep this [potential for military dual-use purposes] in mind. That when we invite—if we were to invite—a Chinese astronaut onto the space shuttle, that the information technology that that single individual might pick up could be turned into a potential Chinese military space platform.308 There is scant evidence, however, that a man orbiting in space would truly add any significant military advantage, especially concerning information technology. Johnson-Freese dryly noted that neither the Americans nor Soviets could find any particular advantage to having a manned military presence in space and that “there seems little basis for such a fear [that Chinese ingenuity would find value in a military-man-in space that eluded the U.S. military]”.309 On a more optimistic note, space cooperation between NASA and the CNSA, its Chinese counterpart, through increased contact and exchanges of information, could help overcome mutual mistrust and ambiguity. Over the long-term, it could potentially give way to strengthened confidence and assurance of each others’ intentions and concerns about space, reducing ambiguity and increasing transparency across the board. Even during the height of the Cold War, America held a joint space docking exercise with the Soviet Union in 1975 which “achieved important technical and political breakthroughs”.310 If the United States could work with its bitter communist rival during the dark days of the Cold War, according to the “space partner” perspective, Washington could safely find a place for Sino-U.S. space cooperation in the 21st century. Working in a more direct fashion with the Chinese, it could be argued, may also help keep their space program directed at peaceful objectives and dampen any secret ambitions to militarize outer space. Even some Chinese scholars would agree on this point, including Wu Chunsi from Fudan University’s Center for American Studies. He suggests that Washington’s active engagement China in space could help create a clean break between the civilian and military programs and that “the commercial and civilian elements of China’s space program will see their capabilities grow along with a sense of independence from the military”.311 Furthermore, Wu argues, “if China follows a path of isolation, exclusion will only deepen its suspicion and resentment, and the commercial and civilian sectors…would be forced to seek help from the government, or even the military”.312 Thus, instead of acting as a “space hyper-power,” a U.S. invitation to the Chinese to become a space partner could arguably soften its image as a global hegemon, and also increase U.S. soft power and credibility with the Chinese.313

ISS – Solves Laundry List (2/3)

Engaging in talks with China, allowing them entry into the ISS, and promoting more open trade regulations with them can support both economic development and prevention of space weaponization

Moltz, Ph.D at Naval Postgraduate School, 11

(Dr. James Clay, “China’s Space Technology:

International Dynamics and Implications for the United States,” May 11, 2011, Accessed 6-30-11, <http://www.uscc.gov/hearings/2011hearings/written_testimonies/11_05_11_wrt/11_05_11_moltz_testimony.pdf>, JSkoog)

Supporters of the current freeze in U.S.­Chinese space relations argue that Washington is sending a signal to Beijing about its deplorable human rights record and is also limiting China’s ability to develop advanced space systems. Unfortunately, while well­intended, current U.S. policy is ineffective sends a weak and off­target signal. Unless the United States is also willing to halt U.S. investment in Chinese manufacturing, cut off Chinese access to the U.S. export market, and find a new client for U.S. debt, holding space cooperation hostage will have no significant impact on China, except pushing it to cooperate with others. In addition, it puts the United States in the odd position of promoting “protectionism” in space and adopting a “defensive” strategy, when opening markets and reducing U.S. export barriers instead would strengthen the U.S. space industry and promote American security through greater engagement with the region. Efforts to keep China off of the International Space Station (ISS), for example, have only strengthened China’s resolve to build its own space stations. Former NASA Administrator Michael Griffin, notably, argues that failing to work with China may cause the United States to be left behind in new international missions, particularly given the fact that current NASA funding will not sustain a unilateral return mission to the Moon, much less continue shouldering of the lion’s share of the ISS budget. A step­by­step process to begin space science cooperation and (if successful) allow gradual Chinese participation on the ISS (first via joint research, then a taikonaut visit, then a possible module) would make more sense: reducing U.S. costs and increasing U.S. knowledge about Chinese space activities.9 Similarly, U.S. legislation and ITAR restrictions barring U.S. space technology from being launched aboard Chinese boosters have harmed U.S. satellite sales worldwide, leading to the production of ITAR­free satellites and causing erstwhile clients to turn to other suppliers to avoid U.S. red tape. The 1999 shift in U.S. policy aimed mainly at addressing national security concerns. But it was an overly blunt instrument, taking up all space technologies rather than only those that cannot be found on the international market. China (like other countries) is certainly interested in acquiring U.S. space technology, yet it is important to point out that the Loral and Hughes investigations in the 1990s did not involve illicit Chinese access to U.S. commercial satellites. The problem instead involved improper meetings by U.S. company officials with the Chinese. Thus, the logical solution is not to ban all U.S.­ Chinese space contacts, but instead to ensure that U.S. companies observe export control regulations in their meetings. Fortunately, U.S. companies have ample incentive to protect what is actually inside their satellites, as they do with Russia and other countries. Supporters of current restrictions also argue that the policy helps protect U.S. space launchers. Indeed, highly inflated costs for U.S. boosters have supported a few U.S. companies. But they have also hurt the U.S. space industry overall by reducing timely and affordable access to space. Fortunately, thanks to recent developments by such U.S. companies as SpaceX (with its Falcon 1 and 9 boosters), the U.S. launch services sector is becoming competitive on the international marketplace without the need to fall back on protectionism. A stronger U.S. policy would focus instead on lowering global barriers to space competition and reducing subsidies by European producers. As a condition for opening the American market to Chinese launchers, the United States should insist that China open its domestic market to U.S. satellite producers for on­orbit services. The United States fought and won this battle with Japan in the late 1980s and should now use the World Trade

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ISS – Solves Laundry List (3/3)

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Organization and other mechanisms to win this case with China, India, and other countries with closed space markets. But enhanced U.S.­Chinese space cooperation cannot occur without stabilization of the security relationship with China in regard to space. In this area, it is encouraging that bilateral military­to­military talks are likely to begin soon to discuss parameters for improved space security in the context of the new strategic dialogue with Beijing. It as yet unclear what direction these talks will take, or what initiatives might be possible. Chinese military receptivity and transparency—not seen in recent years—will be necessary to move this dialogue forward. However, if China shows a willingness to respond, the United States should be ready with concrete ideas aimed at creating a framework for more responsible Chinese behavior and mutually beneficial cooperation. Actions by the Nixon administration in the early 1970s established mutually beneficial norms with the Soviet Union under far more difficult circumstances. At a minimum, measures with China should include similar mutual pledges of non­interference with “national technical means” of verification, as well as early­warning satellites. In addition, given China’s 2007 ASAT test, it would be beneficial to exchange joint statements rejecting debris­producing events involving orbital objects, particularly those above 150 miles in altitude. Finally, getting China to agree to regular (at least annual) consultations10 on space security would improve U.S. knowledge of Chinese military programs and create the mechanisms for the prevention of dangerous activities. All of these mechanisms are in U.S. national interests.

\*\*\* Solvency – Mars Mechanism

Mars – Now is Key

China is already joining the space race to Mars – now is the key time for strong relations

Laxman, journalist who specializes in space exploration tech and procedures, 11 (Srinivas, Asian Scientist, “China’s Space Mission: The Long March To The Moon And Mars”, June 27, http://www.asianscientist.com/features/chinas-space-mission-moon-mars/, accessed 6/30/11, CW)

China’s space plans do not focus only on human space flights and the moon, because it has set its sights on the Red Planet as well. Currently, its space scientists are working on the country’s first unmanned Mars exploration mission between 2014 and 2033, and possibly even a manned landing on Mars during the 2040-2060 period. Notably, in the Mars 500 project, which is being conducted at a facility outside Moscow, it is a Chinese candidate, Wang Yue (王跃), who is topping the list in performance. The program is a simulated human landing on Mars, and the entire mission lasts for 500 days.

Mars – US Wants To Coop With China

Obama wants to co-operate on Mars with China

Svitak, Space News, 5/4/11

(Amy, Space News staff writer, “China Viewed as Potential U.S. Partner in Future Mars Exploration”, Space News, <http://www.spacenews.com/policy/110504-china-partner-mars-exploration.html>, accessed 7/1/11) EK

WASHINGTON — U.S. President Barack Obama views China as a potential partner for an eventual human mission to Mars that would be difficult for any single nation to undertake, a senior White House official told lawmakers. Testifying May 4 before the House Appropriations commerce, justice, science subcommittee, White House science adviser John Holdren said near-term engagement with China in civil space will help lay the groundwork for any such future endeavor. He prefaced his remarks with the assertion that human exploration of Mars is a long-term proposition and that any discussion of cooperating with Beijing on such an effort is speculative. Holdren, who said NASA could also benefit from cooperating with China on detection and tracking of orbital debris, stressed that any U.S. collaboration with Beijing in manned spaceflight would depend on future Sino-U.S. relations. “But many of us, including the president, including myself, including [NASA Administrator Charles] Bolden, believe that it’s not too soon to have preliminary conversations about what involving China in that sort of cooperation might entail,” Holdren said. “If China is going to be, by 2030, the biggest economy in the world … it could certainly be to our benefit to share the costs of such an expensive venture with them and with others.”

Mars – China Wants To Go

China is planning on-board missions to both the moon and Mars

The Straits Times ‘11

(Peh Shing Huei, The Straits Times, 8 January 2011, “Red star aims for the Red Planet; “Experts divided over China's goal to be the first to put a man on Mars”, LexisNexis, 7.1.11, SWolff)

China will launch its first probe to Mars this year, opening yet another chapter in its space exploration as the country attempts to be the first to put a man on the Red Planet. The young space power announced last Sunday that its Yinghuo-1, or Firefly, orbiter will blast off in October in a joint operation with Russia, according to state news agency Xinhua. The probe comes after a two-year delay, which the Chinese blamed on the Russians, and will realise the country's dream of exploring Mars since the early 1990s under the Project 863 Planetary Exploration Plan. The top guns of China's space programme, such as chief rocket designer Long Lehao, had publicly articulated the country's wish to venture to the moon and Mars after it launched its first spacecraft in 1999. When the national science week was organised in 2002, exhibits included a Chinese base on Mars - complete with greenhouses and domes. In 2003, China became the third country to send a man into space after the US and Russia. It will have a second Mars probe, likely in 2013, this time on its own. It also plans an unmanned lunar landing in the same year. These are all part of its moon-Mars strategy, which is similar to that of the United States - conquer the lunar rock first before using it as a stepping stone to a much further afield Mars. Beijing wants a manned mission to the moon by 2020 and some experts believe that the Chinese could make the 80-million-km journey to Mars 10 years after that. Russian space patriarch Boris Chertok, for example, has been so impressed with Beijing's space programme that he predicted it would be the Chinese who first 'people Mars'. American historian Jeffrey Wasserstrom said the optimism is rooted in China's current image as a strong high-tech country. 'There's a long international tradition of associating space travel with a country being economically and technologically advanced,' he said. 'It is interesting that now that it is China, rather than the US, which is so closely identified with state-of-the-art trains, there is talk of the possibility that the People's Republic will be the country that gets to Mars ahead of everyone else.' But will it? The US, Russia and India have made known similar plans in this 21st-century space race. Just last year, US President Barack Obama said: 'By the mid-2030s, I believe we can send humans to orbit Mars and return them safely to Earth. And a landing on Mars will follow. And I expect to be around to see it.' China has in its favour a rich government which would not stint on a project estimated to cost at least half a trillion US dollars. After all, the country's space programme has an official 20-year goal to 'utilise space resources to...enhance overall national power' and nothing will boost nationalism like a Chinese landing on Mars. China also has newer space infrastructure, such as launch sites and mission control centres, when compared with its rivals. The infrastructure is good for the next 30 years and in time for a human Mars landing. But some Chinese analysts believe their country is not equipped to participate and win the race. 'If the US wants to send a man to Mars on its own, it will have to spend a huge amount of money. It is not something one country can afford...let alone China,' said Professor Wu Ji, director general of Centre for Space Science and Applied Research at the Chinese Academy of Sciences. 'We are a developing country in technology. Not yet a space superpower.' Added space expert Jiao Weixin: 'China lacks the required rocket technology and space communications. I doubt we can be the first country to reach Mars.'

\*\*\* Solvency – General

Mission Planning – China Capabilities

Mars, lunar and orbital docking missions already planned by China

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. 8, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA539619, accessed 6/29/11) EK

It appears the PRC is likely are developing their program based on 21st century motivations as space is an opportunity to not only build national prestige, but move forward in the global economy as a supplier and global player in the benefits of space development. They are highly interested in the commercial satellite industry, with plans to launch 100 satellites from 2006 to 2010.45 The construction of its fourth launch site will also greatly expand China’s capability of launching payloads into GEO orbit.46 Future manned and unmanned missions spanning the next 15 years include plans for orbital docking, moon voyages, and the beginnings of a Mars program.47 China’s resounding success and planned upgrades to its Long March series boosters will help in this endeavor. China’s commitment to space is evident with its possession of “the facilities, satellite technology, mission control centers, and launchers required of a space power.”48

Mission Planning – Key To Coop

The U.S. and China mission planning would allow for common objectives

Cheng, Heritage Foundation Asian Studies Center Research Fellow, 9

(Dean, The Heritage Foundation's research fellow on Chinese political and security affairs, specializes in China's military and foreign policy, written extensively on China's military doctrine, technological implications of its space program, worked with Science Applications International Corp, with the China Studies division of the Center for Naval Analyses, studied China's defense-industrial complex for a congressional agency, as an analyst in the International Security and Space Program, spoken at the National Space Symposium, National Defense University, the Air Force Academy, Massachusetts Institute of Technology (MIT) and Eisenhower Center for Space and Defense Studies, “REFLECTIONS ON SINO –US SPACE COOPERATION,” *Space and Defense*, Vol. 2, No.3, December 2009, pg. 4) KA

Joint mission planning. This level of cooperation would involve establishing a common objective for the two (or more) parties, with each side contributing its own spacecraft. The best example is probably the Disaster Monitoring Constellation (DMC). The DMC is comprised of satellites from five nations (Algeria, Nigeria, PRC, Turkey, the UK). These operate together as a single constellation. Thus, it constitutes more than simply a matter of sharing information, but instead involves operating together in order to provide prompt support to international disaster monitoring. Another example of joint mission planning, this time in a bilateral sense, is the Apollo- Soyuz Test Project (ASTP). The ASTP was cited at the Eisenhower Center workshops as a possible model for Sino-US space cooperation, with some suggesting a Shuttle- Shenzhou mission. In the ASTP, the US and USSR agreed to a mission involving a rendezvous and docking, with each nation using its own spacecraft. To undertake the mission required not only making sure that the docking systems were compatible, but that each side understood the other’s flight procedures. Consequently, not only were there repeated exchanges of flight crews, but there were also repeated sessions involving both nations’ flight controllers mission control centers and their respective communications links.6 It should be noted that the ASTP ultimately involved nearly four years of planning and exchanges, suggesting that joint mission planning will be an extensive, and extended, process.

Missions are key to cooperating with China – common uniting factor

Kulacki, senior analyst and China project manager in the Global Security Program at the Union of Concerned Scientists, 2011 (Gregory, “Engaging China in Space,” All Things Nuclear: Insights on Science and Security, <http://allthingsnuclear.org/post/2826515287/engaging-china-on-space>, January 19, Accessed July 1, 2011, NS)

To be successful, U.S. efforts to engage China on cooperation in space need a specific task or project, somewhere to go together or something to do together. This project needs to be significant enough for the senior Chinese leadership to interrupt the trajectory of China’s current space agenda and direct China’s space planners to accommodate it. For that to happen China’s leaders will need to be confident the United States will carry through on the project. The abrupt end to the agreement to have China launch U.S. satellites in the 1990s is a reminder of the potential political risk to any Chinese leader considering cooperation with the United States in space. Without those two elements, U.S. efforts to engage China’s space stakeholders are unlikely to succeed. U.S. officials should understand that China’s Foreign Ministry is empowered to implement, but not initiate, policy. If there is nothing to implement, there is nothing for it to do but engage in polite conversation. This may be why the Obama administration officials leave discussions with their Chinese counterparts feeling confused and frustrated. The administration may decide it’s not willing to take as big a step as is needed to cut the Gordian knot that’s binding up meaningful engagement with China on space. But it should understand what’s behind China’s tepid response to its proposals.

Solvency – AT – Coop Fails – Common Standards – Key To Coop

The U.S. and China common standards and baselines are a pre-requisite for cooperation over space

Cheng, Heritage Foundation Asian Studies Center Research Fellow, 9

(Dean, The Heritage Foundation's research fellow on Chinese political and security affairs, specializes in China's military and foreign policy, written extensively on China's military doctrine, technological implications of its space program, worked with Science Applications International Corp, with the China Studies division of the Center for Naval Analyses, studied China's defense-industrial complex for a congressional agency, as an analyst in the International Security and Space Program, spoken at the National Space Symposium, National Defense University, the Air Force Academy, Massachusetts Institute of Technology (MIT) and Eisenhower Center for Space and Defense Studies, “REFLECTIONS ON SINO –US SPACE COOPERATION,” *Space and Defense*, Vol. 2, No.3, December 2009, pg. 3-4) KA

Establishing common standards and baselines. A potentially deeper level of interaction would be cooperation in the creation of common technical standards or baselines. This level of cooperation would create not only equipment and procedures that were compatible, but would also begin to expose scientists, technical staff, and administrators from each side to the other. To some extent, this has occurred in some areas of satellite services. Companies manufacturing GPS receivers, for example, are all accessing the same GPS signal; therefore, to some extent they must work to a common standard (at least in terms of their receivers). That does not mean, however, that the receivers are mutually compatible, only that they rely upon a common signal source and format. Cooperation at this level would, in fact, encourage not just accessibility but compatibility. Establishing common standards and baselines, however, would require each side providing the other with information on how each side designs their systems, and, to some extent, how those systems operate. Greater cooperation might require more detailed discussion of operating procedures. All of this may be seen as offering a potential venue for espionage. It was this type of concern in the Loral and Hughes scandals that ultimately ended American use of Chinese commercial space launchers. In the wake of two launch failures involving APSTAR II atop a Long March-2E and Intelsat 708 aboard a Long March-3B, the American partners, Hughes Space and Communications International, Inc., and Space Systems/Loral respectively, assisted in the subsequent investigations. In each case, the companies helped identify shortcomings, involving both design flaws as well as failures in analytical methodology. This assistance was seen as contributing significantly to improvements in not only China’s space systems, but China’s nuclear missile forces.

Solvency – Coop – General – Lots Of Options

Cooperation with China over space can happen in many ways

Cheng, Heritage Foundation Asian Studies Center Research Fellow, 9

(Dean, The Heritage Foundation's research fellow on Chinese political and security affairs, specializes in China's military and foreign policy, written extensively on China's military doctrine, technological implications of its space program, worked with Science Applications International Corp, with the China Studies division of the Center for Naval Analyses, studied China's defense-industrial complex for a congressional agency, as an analyst in the International Security and Space Program, spoken at the National Space Symposium, National Defense University, the Air Force Academy, Massachusetts Institute of Technology (MIT) and Eisenhower Center for Space and Defense Studies, “REFLECTIONS ON SINO –US SPACE COOPERATION,” *Space and Defense*, Vol. 2, No.3, December 2009, pg. 2) KA

Approaches to may be instances of both bilateral and multilateral cooperation for each level. Cooperation In the most general terms, there are four levels of cooperation: sharing data; establishing common standards; planning missions jointly; and undertaking missions jointly. Each of these involves measures that might be undertaken either bilaterally, between the PRC and the United States, or multilaterally, as part of larger, multinational efforts. Neither the levels nor the approaches are mutually exclusive. That is, there is significant room for overlap between levels, just as there

There are various things we can cooperate with China on

Logan, Specialist in Resources, Science, and Industry Division, 8

(Jeffrey, CRS Report for Congress, “China’s Space Program: Options for U.S.-China Cooperation”, 11/29/8, p.6, accessed 7/1/11, CW)

Information and data sharing. Confidence building measures (CBMs) such as information exchange on debris management, environmental and meteorological conditions, and navigation, are widely considered an effective first step in building trust in a sensitive relationship. NASA has done some of this with CNSA in the past, but more is possible. ! Space policy dialogue. Another area of potential exchange could begin with “strategic communication,”24 an attempt for each side to more accurately understand the other’s views, concerns, and intentions. Dialogue on “rules of the road,” a “code of conduct,” or even select military issues could be included. ! Joint activities. This type of cooperation is more complex and would probably require strong political commitments and confidence building measures in advance. Bi- and multi-lateral partnerships on the international space station, lunar missions, environmental observation, or solar system exploration are potential options. A joint U.S.-Soviet space docking exercise in 1975 achieved important technical and political breakthroughs during the Cold War.

Solvency – 4 Step Plan – Coop

**Specific plan for cooperation**

**Zhou, Center for Space and Applied Sciences, 8**

(Yi – Chinese Academy of the Sciences and Professor at George Washington University, Perspectives on Sino-US cooperation in civil space programs, Science Direct, Space Policy 24 (2008) 132-139) AC

Cooperation will take time and effort to establish: It took almost 10 years from the time CSSAR became the dissemination center for ESA’s Cluster mission to the signing of the DSP cooperative agreement in July 2001 between CNSA and ESA. Cooperation between China and the USA will doubtless take an equally long time to develop, for at present there is no government-level research cooperation, nor any joint space project. Initially, a highly integrated cooperative framework is not suitable, so related high-level cooperative activity such as the framework of the Cassini–Huygens project between ESA and NASA or the ISS cooperative framework are not examples of appropriate starting points. Cooperation between the USA and China should be implemented step by step. As a first step, a normal dialogue or forum mechanism on space science or other topics should be built between the two countries’ national space agencies. The dialogue or the forum can be focused on such topics as: discussing potential cooperative projects; presenting the progress of the present national civil space programs of the two countries; exchanging opinions on international space events; and communication between the two countries on space policy and direction. If CNSA and NASA could organize this kind of forum annually, it would be very helpful to the two countries’ future cooperative projects. Furthermore, NASA and its space centers could also organize some bilateral space science symposium with the CAS. This could be a start in getting Chinese space professionals and civil projects known in the USA. The second step should be to organize some cooperative research in space science. Such collaboration does not necessarily need to involve a wide scope or large funding. But, for political reasons in both China and the USA, it should be a high-level agreement. Bilateral disclosure and sharing of space science mission data or supplying space services to each other would be positive gestures. This kind of high-level cooperation would be smoother than cooperation between individual researchers. ESA’s Cluster mission provides a good model on this point. Because Cluster’s data sought an international receiver, China was given a chance to participate. There are currently some good opportunities worth noting. For example, on 5 January 2008, China declared the formal start-up of its Meridian Project. Based on this large land-based observation space weather project, Chinese scientists proposed an international cooperative plan named the International Space Weather Meridian Circle Program (ISWMCP) which is proposed to connect the 1201E and 601Wmeridian chains of ground-based monitors all over the world. This will significantly enhance the ability to monitor the space environment worldwide. Russia has joined the program. Other space weather research partners will be welcome. All joint partners will share the observation data and research achievements. The ISWMCP also forms China’s contribution to the International Heliophysical Year (IHY). Perhaps this proposal can be an area for beginning the two countries’ actual space cooperation. The third step should be to organize a joint cooperative project based on common interests. By taking the previous two steps, the two countries will have learned how to accommodate each other’s desire and share more knowledge and discoveries. For this step, the US and Chinese governments or civil agencies can choose a suitable proposal based on areas of common interest to promote a joint space science mission. The two countries can divide the work of launching, satellite and space instrument development, and data receiving. They can collaborate on management and scientific research for the entire duration of the project, from the proposal to publishing papers together. The fourth step is to become partners in space exploration. This may seem impossible today. But, given that China’s lunar exploration project’s present objective is a robotic lunar landing and sample return by the year 2017, a feasible schedule including Chinese robotic flights to the Moon and a US human return to the lunar surface could give the two countries enough time to develop a stable space relationship. At that time, the two great countries would then be able to work hand-in-hand to explore the Moon, Mars and other unknowns for the benefit of mankind.

Solvency – Dialogue – Coop (1/2)

A dialogue with China is necessary to open up cooperation on several fronts and deter miscalculation wars

Chase, Associate Research at the United States Naval War focusing Taiwan’s security policy, Chinese military modernization, and Chinese nuclear and conventional missile force developments, 2011

(Michael, “Chinese Military Modernization: Challenges and Opportunities for the United States,” The Moderate Voice, January 26, http://www.china-defense-mashup.com/chinese-military-modernization-challenges-and-opportunities-for-the-united-states.html, accessed July 6, 2011, NS)

At the same time, attempts to strengthen deterrence must be calibrated to avoid inadvertently fueling China's worst fears about U.S. strategic intentions. Because of China's concern that the United States is determined to prevent its emergence as a great power through encirclement and containment, Washington should carefully weigh taking actions that could further exacerbate Chinese fears. To help prevent misunderstanding or miscalculation, the United States should continue to pursue dialogue with China on issues such as security on the Korean peninsula, space and cyber warfare, and strategic stability in the U.S.-China relationship. The United States should also seek to strengthen military cooperation with China in areas such as anti-piracy and humanitarian assistance operations. This week's state visit presents an opportunity for Presidents Obama and Hu to lead the United States and China toward a more cooperative relationship, but mutual strategic suspicion and a complex mix of convergent and divergent interests suggest that neither side should expect the path forward to be an easy one.

Even if no meaningful dialogue happens its worth it – still increases transparency

Martel and Yoshihara, The Center for Strategic and International Studies and the Massachusetts Institute of Technology, 3

(William C. Martel is a professor of national security affairs at the Naval War College in Rhode Island. Toshi Yoshihara is a doctoral candidate at the Fletcher School of Law and Diplomacy, Tufts University, and a research fellow at the Institute for Foreign Policy Analysis in Massachusetts., “Averting a Sino-U.S. Space Race” The Washington Quarterly 26.4 (2003) 19-35, <http://muse.jhu.edu/journals/washington_quarterly/v026/26.4martel.html>, Accessed July 1, 2011, EJONES)

Given the stakes involved, both sides should seek to avert, or at least to manage, this looming competition. Even if efforts to forestall this rivalry fail, the United States and China should formulate policies that seek to limit the suspicions and fears of each other as well as the risks and costs of any confrontation in space. Both sides should begin to develop institutions, rules, and procedures that provide a framework for confidence buildingin space. For example, during the Cold War, the United States and the Soviet Union developed standard operating procedures and arms control regimes to avert confrontation and escalation. To start, Washington and Beijing should at least prepare the way for gradual transparency in space because the absence of knowledge about the other's intentions and actions fuels heightened threat perceptions. It is not too late to pursue several policy initiatives at the highest levels [End Page 30] that would allow both sides to understand more fully what the other is doing and how to interpret those actions. An important first step for both sides is to acknowledge that a potential problem exists and that it requires consideration at the presidential level. Thus, the strategic importance of space should be included as an agenda item at a future summit between Bush and Chinese president Hu Jintao. To be sure, Sino-U.S. presidential summits have sometimes produced symbolic gestures of strategic cooperation rather than substantive progress, such as the 1998 Clinton-Jiang agreement to de-target nuclear weapons. Indeed, concrete agreements or alignments of interests are likely to prove elusive or fleeting in this case as well. At best, the two leaders could simply agree to disagree for the time being. Nevertheless, even a limited discussion at a broader bilateral summit would energize policymakers to focus their attention on the increasingly important problem of a potential confrontation in space. The two leaders could jointly authorize further talks among civilian and military officials on strategic and practical matters related to space, with the objectives being to sustain a regular dialogue, foster realistic expectations about one another, and tailor policies consistent with changing strategic and technological realities.

Solvency – Dialogue – Coop (2/2)

US China dialogue key – if we have disagreements we have to be able to talk about it

Steinberg, Deputy Secretary of State, 10

(James B., American academic and political advisor, U.S. Department of State, 4-11-10, “U.S. - China Cooperation on Global Issues”, <http://www.state.gov/s/d/2010/141772.htm>, MLF, accessed 7-1-11)

I think we hope to persuade the Chinese that the world we live in requires more cooperation not competition, and that neither side will benefit from a military competition between the United States and China or between China and any of its other neighbors. This is a situation where we’ve learned from long experience that the risks associated with those kinds of competition are severe and that nobody wins in the long term. So I think that’s why dialogue is so critical in this sphere and why we’ve tried to persuade our Chinese counterparts to try to insulate that dialogue from our disagreements on substantive issues so that we don’t lose the opportunity to discuss areas where we have concerns, as well as where we have obvious common interests.

**Bilateral Dialogues are important for science collaboration as well as satellite security**

**Inside Missile Defense, 6/15/11**

(Inside Missile Defense, U.S. OFFICIAL HIGHLIGHTS CONFIDENCE- BUILDING MEASURES FOR SPACE, Vol. 17 No. 12, Lexis) AC

Deputy Assistant Secretary of State for Arms Control, Verification and Compliance Frank Rose this week spoke about U.S. space policy during a trip to the Czech Republic. In his speech, he highlighted "conducting regular Space Security Dialogues with both established, as well as emerging, space-faring nations." Specifically, according to Rose: "This is important not only for our broader national security and foreign policy concerns, but also in carrying out our diplomacy and public diplomacy responsibilities under the President's National Space Policy." He highlighted the collision of a commercial Iridium communications satellite and an inoperable Russian Cosmos military satellite in February 2009 as a "key stimulus to establishing these dialogues.""This collision -- and China's 2007 anti-satellite test -- created significant amounts of dangerous debris in low Earth orbit and further increased the future risks to human spaceflight and satellite services," Rose continued. Consequently, U.S. Strategic Command has begun to provide notifications of potential orbital collision hazards to all government and private sector satellite operators, he added.For example, over the past year, STRATCOM's Joint Space Operations Center, or JSpOC, has notified Russia 252 times and China 147 times regarding close approaches between satellites, according to Rose. "Furthermore, notifications have been provided to government and commercial owners/operators approximately 677 times since May 2010 due to Chinese ASAT debris alone."After receiving those and other notifications, satellite owners and operators maneuvered their satellites over a hundred times in low-Earth orbit since the beginning of 2010," he continued. "Such notifications are themselves an important confidence-building measure, and they also provide the basis for pursuit of other bilateral [confidence-building measures] in diplomatic, military-to-military, and scientific channels."Rose also highlighted conducting familiarization visits of satellite control centers such as the JspOC as another potential confidence-building measure. The United States will host Russian officials later this year at the JSpOC at Vandenberg Air Force Base in California, he added. -- John Liang

Solvency – Data Sharing – Solves Coop

The U.S. and China should cooperate over sharing data about space

Cheng, Heritage Foundation Asian Studies Center Research Fellow, 9

(Dean, The Heritage Foundation's research fellow on Chinese political and security affairs, specializes in China's military and foreign policy, written extensively on China's military doctrine, technological implications of its space program, worked with Science Applications International Corp, with the China Studies division of the Center for Naval Analyses, studied China's defense-industrial complex for a congressional agency, as an analyst in the International Security and Space Program, spoken at the National Space Symposium, National Defense University, the Air Force Academy, Massachusetts Institute of Technology (MIT) and Eisenhower Center for Space and Defense Studies, “REFLECTIONS ON SINO –US SPACE COOPERATION,” *Space and Defense*, Vol. 2, No.3, December 2009, pg. 2-3) KA

The four levels of cooperation involve a steadily greater level of interaction between the two sides. At the same time, each subsequent level of cooperation also entails greater disclosure, and increasingly involves not only revealing types of data, but also decision-making processes. *Sharing data*. Most promising may be the possibility of sharing the data derived from space. With the increasing quantity and quality of data derived from space that is available commercially, it was suggested by some of the participants in the Eisenhower Center workshops that data-sharing may be a means of facilitating cooperation between the US and the PRC. Indeed, there is already some degree of data sharing already, in both bilateral and multilateral contexts. For example, the United States is on record as sharing debris data with the PRC prior to any manned Chinese launches. Some of this already occurs. The US, for example, has provided collision avoidance analysis to the PRC prior to several of its manned launches, including the Shenzhou-VI.1 In a more multilateral context, there are already several venues where the US and the PRC are both members. These include the World Meteorological Organization (WMO), to which both nations provide data from their respective meteorological satellites. In addition, the United States, the PRC, and the European Space Agency have all decided to allow unrestricted access to their respective Earth observation data and archives.2 Thus, the US can now examine Chinese data from its CBERS (China-Brazil Earth Resources Satellite) system, while the PRC may examine the range of LANDSAT data. While this may not constitute direct sharing of data, each state can access the information that the other provides. Similarly, the United States decided years ago to make the GPS signal readily accessible. While it initially only provided a downgraded signal, today, the more accurate signal is made available. While not specifically aimed at China (or any other nation), this again suggests that there is ample room for sharing data. Less sanguine observers would not, however, that such cooperation is nonetheless extremely limited. Both nations, for example, are also party to the UN Convention on the Registration of Objects Launched into Outer Space, as well as the Outer Space Treaty.3 Compliance by both states (as well as others) to the UN Registration, however, has been described in the past as “spotty.”4

China Say Yes (1/3)

China will cooperate – multiple incentives

Foust, editor of Space Review, 6,

(Jeff, Editor and Publisher of Space Review, “China, Competition, and Cooperation,” Space Review, April 10, 2006, <http://www.thespacereview.com/article/599/1>, JSkoog)

After Luo’s talk, it was clear that China’s space program does not pose the threat to American space supremacy voiced several days earlier by some congressmen. Not only does China not have any stated plans to land humans on the Moon in 2017 (or at any time in the foreseeable future), China’s plans for the next five to ten years appear focused on trying to bring its space capabilities up to the level that the existing major space powers, including the US, have today. That does not mean that the US should become complacent regarding the Chinese, but it also means that there is no reason to fear them as well. Some might argue that there’s no reason to take Luo at his word, and that China may yet be developing in secret advanced space capabilities, including manned lunar exploration. True, it is wise to be skeptical about pronouncements of government officials, regardless of country. However, such capabilities, which may require the development of even-larger launch vehicles and a new spaceport, cannot be developed in secret forever. (See “Red Moon. Dark Moon.”, The Space Review, October 11, 2005.) Moreover, working on such projects in secret could negate what is one of the major purposes of the Chinese space program: international prestige. Some insight into that came during the question and answer session after Luo’s CSIS talk, when someone asked why China was pursuing both manned spaceflight and lunar exploration programs when he previously said the focus of Chinese space efforts was on practical applications. Luo argued that both programs fall into the space science and technology development aspects of China’s overall program. Moreover, in arguments not entirely unfamiliar to space advocates in the US, he said that the manned program also permitted research in biological and agricultural projects. However, one can argue that the biggest benefits of both the Shenzhou and Chang’e programs are prestige: China is only the third country to launch humans into orbit, and sending a series of probes to the Moon would put it into a similarly elite group of nations. By putting itself generally in the same tier of space powers as the US, it not only helps establish its credentials as a world power, it also elevates itself above the other major countries in East and South Asia, including spacefaring nations like Japan and India. Of course, one way for China to use space to make its mark as a world power is to race the US back to the Moon, as some in the US think China is doing. However, that would require a significant amount of money, which the Chinese program appears to be lacking. Asked bout the size of the Chinese space budget, Luo said that Chinese budgets were “very complicated” but estimated annual expenditures at about $500 million. That’s not only a small fraction of NASA’s $16.5-billion budget, it’s also smaller than what Russia—which, like China, benefits from low-cost labor—spends on its space program today. It may explain why some of the high-profile, but expensive, aspects of China’s space program, like Shenzhou, have proceeded at a relatively slow pace. Chinese get “very humble” when the two programs are compared, according to Congressman Tom Feeney. “I think [that’s] partly because they do not want to be a threat and partly because they do not want to overly excite expectations that they cannot live up to.” Given that modest budget, it’s no wonder that Luo emphasized cooperation, not competition, with the US in his talk. He noted that China is actively working with a number of other countries on various space ventures, and gently chided the US for not being nearly as open to cooperation with China as it was back in the 1980s. “I think one country, if it is open, it will have progress and prosperity, and if it is closed, then it is going to be left behind,” he said. He even suggested that China might be willing to participate in some way with the International Space Station. “ISS cooperation, we have always been interested,” he said. “We don’t have the ticket yet.” In any case, any US-China cooperation in space would provide a big boost in regional and international prestige for China, since it would be perceived as being an equal, in some respects, of the US in space—and it would cost far less than a space race. Others have previously pointed out that China does not appear competitive when it compares its space program with the American effort. Rep. Tom Feeney, who visited China earlier this year as part of the first Congressional delegation to go to the Chinese manned launch center in Jiuquan, told a Space Transportation Association breakfast in February that Chinese get “very humble” when the two programs are compared. “I think [that’s] partly because they do not want to be a threat and

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China Say Yes (2/3)

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partly because they do not want to overly excite expectations that they cannot live up to,” he said. Such cooperation raises a number of foreign policy issues for both countries, but at least some in the US believe it’s time to engage China on space, rather than try to contain it. “Somehow, our strategy of containment, if its goal is to prevent you [China] from becoming a spacefaring nation, isn’t working,” said John Hamre, president of CSIS and a former deputy secretary of defense during the Clinton Administration, in introductory remarks at the April 3 event. Despite Luo’s statements, it’s likely some in Congress will continue to see China’s space program as a competitive threat to the US. According to the published accounts of the March 30 hearing, some used the perceived space race with China as proof that NASA needed more funding. According to Space News, Tom DeLay said that he would fight to get up to $5 billion added to NASA’s budgets in the coming years to accelerate development of the Crew Exploration Vehicle, citing China’s program as the reason. “We had a 40-year lead in space and we’re giving it up. The US is quibbling over $3 billion to $5 billion. It’s amazing to me,” he said. It is certainly tempting for space advocates to build up the threat of a space race with China—even if such a competition is highly unlikely—to help loosen Congressional purse strings and allow NASA to free itself from its current budget crunch. However, that short-term gain must be tempered by long-term risks: if a space race does not materialize, future Congresses and Administrations may revisit NASA’s budget and take away the funding it previously added. Worse, if the Vision for Space Exploration becomes associated, in the eyes of Congress or the public, as NASA’s instrument in a space race with China, the Vision itself could become threatened down the road when that race does not take shape. However, such long-term planning is not necessarily Congress’s forte, and some members of Congress have even shorter time horizons: on April 4, DeLay announced that he would be resigning from Congress by June, late enough to still be around when NASA delivers its report on China’s space program, but not nearly long enough to shepherd through the additional funding he claims is needed for NASA to counter the Chinese threat. There are signs, though, that cooperation may yet take hold between NASA and CNSA. After his CSIS speech, Luo flew to Colorado Springs to speak at the National Space Symposium. After his speech, he revealed to SPACE.com that he plans to invite Michael Griffin to come to China this fall. That may be the first step towards cooperation between the two nations’ space programs, or, at the very least, defuse any notions of a space race that, in the long run, could do NASA more harm than good.

China wants space co-operation

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. 10-11, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA539619, accessed 6/29/11) EK

It is evident in China’s 2006 White Paper on space activities that international cooperation in space is nothing new to the PRC and important with regard to its space ambitions. Listed as one of their principles of development (Appendix B), China seeks cooperation “on the basis of the principles of equality, mutual benefit, peaceful utilization of outer space, and common development.59 Since 2001, China has “signed 16 international space cooperation agreements and memorandums with 13 countries, space agencies and international organizations.”60 Below are some examples of Chinese space cooperative efforts with international partners.

China Say Yes (3/3)

**China seeking transparent cooperation with US on space policy**

**Morring, Aviation Week senior space editor, & Perrett, Aviation Week Asia- Pacific Bureau Chief, 9**

(Frank, Jr., & Bradley, 11/23/09 Aviation Week & Space Technology, 00052175, 11/23/2009, Vol. 171, Issue 19:”New Topic” EBSCOhost, accessed 7/1/11, BLG)

**"The United States and China look forward to expanding discussions on space science cooperation and starting a dialogue on human spaceflight and space exploration, based on the principles of transparency, reciprocity and mutual benefit," says the statement, which was hammered out in advance of Obama's visit. "Both sides welcome reciprocal visits of the NASA administrator and the appropriate Chinese counterpart in 2010." The talks could lead to a role for China on the International Space Station, and possible rides to space for U.S. astronauts on China's Shenzhou spacecraft.** John Holdren, Obama's science adviser, has publicly raised the idea of the latter, while Wang Wenbao, director of the China Manned Space Engineering Office, has left open the possibility of the former (AW&ST Sept. 28, p. 24). But even the language of the joint statement suggests many hurdles face a reprise of the U.S.-Russian space merger that came at the end of the Cold War. For starters, it isn't clear on either side of the Pacific just exactly who an "appropriate Chinese counterpart" for Bolden would be.

U.S. and China are open to space cooperation

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. iv) EK

On January 11, 2007, China successfully executed a direct-ascent anti-satellite (ASAT) test/demonstration by destroying one of its aging weather satellites. This event captured the attention of the world, especially the U.S. It is believed that China is pursuing a host of counterspace capabilities but the question remains as to why. There are many possible reasons for China’s pursuit of counterspace capabilities, with one of the more likely being a means to gain an advantage when facing a dominant conventional military force. Whatever China’s motivation is, it is important for the U.S. to take action to deter China from further ASAT operations that could possibly harm satellite systems on orbit. It is the intent of this research to propose the idea of U.S.-China space cooperation in order to deter the PRC from potentially harmful ASAT operations. This is especially important given the current lack of dialogue between these two nations with regard to space issues. The respective space policies of the U.S. and China show that each nation is open to space cooperation, and both currently engage in international space cooperative efforts. U.S.-China space cooperation can provide benefits to both nations and ultimately provide greater transparency and trust with regard to each nation’s space activities. Acquiring this transparency and trust through cooperation could be an ideal solution in deterring China from further harmful ASAT operations.

China Say Yes – Staffed Missions

China wants to co-operate with U.S. – specifically on staffed missions

de Selding, Space News, 4/14/11

(Peter B., Space News staff writer, “Chinese Government Official Urges U.S.-Chinese Space Cooperation, Space News, http://www.spacenews.com/civil/110414-chinese-official-space-cooperation.html, accessed 7/1/11) EK

COLORADO SPRINGS, Colo. — A top Chinese government space official on April 14 appealed to the U.S. government to lift its decade-long ban on most forms of U.S.-Chinese space cooperation, saying both nations would benefit from closer government and commercial space interaction. He specifically called for cooperation on manned spaceflight, in which China has made massive investment in recent years. Addressing the National Space Symposium here, Lei said Chinese vehicles launched more than 20 U.S.-built satellites in the 1990s. While cooperation with the United States has been shut down, he said, China has maintained relations with the 18-nation European Space Agency, Brazil, France, Russia and others. China also has developed a telecommunications satellite product line that has been bundled with a Chinese Long March vehicle to offer in-orbit delivery of telecommunications spacecraft to a half-dozen nations that in many cases can offer China access to their crude oil reserves. Lei said he sees three areas in which U.S.-Chinese cooperation would be in both nations’ interests. The first, he said, is an open commercial access of each nation to the other’s capabilities in satellites and launch vehicles. The second, he said, is manned spaceflight and space science, particularly in deep space exploration. The third is in satellite applications including disaster monitoring and management.

Serious commitment ensures Chinese interest in cooperation

Kulacki, senior analyst Global Union of Concerned Scientists, 1-19-11

(Greg, Dr. Kulacki served as an Associate Professor of Government at Green Mountain College, Director of External Studies at Pitzer College and Director of Academic Programs in China for the Council on International Educational Exchange.Dr. Kulacki earned a doctorate in Political Theory from the Department of Government and Politics and a master’s in International Relations from the University of Maryland, College Park. He also completed graduate certificates in Chinese Economic History and International Politics at Fudan University in Shanghai. “Engaging China on Space” accessed: 6-30-11 <http://allthingsnuclear.org/post/2826515287/engaging-china-on-space>) TJL

To be successful, U.S. efforts to engage China on cooperation in space need a specific task or project, somewhere to go together or something to do together. This project needs to be significant enough for the senior Chinese leadership to interrupt the trajectory of China’s current space agenda and direct China’s space planners to accommodate it. For that to happen China’s leaders will need to be confident the United States will carry through on the project. The abrupt end to the agreement to have China launch U.S. satellites in the 1990s is a reminder of the potential political risk to any Chinese leader considering cooperation with the United States in space. Without those two elements, U.S. efforts to engage China’s space stakeholders are unlikely to succeed. U.S. officials should understand that China’s Foreign Ministry is empowered to implement, but not initiate, policy. If there is nothing to implement, there is nothing for it to do but engage in polite conversation. This may be why the Obama administration officials leave discussions with their Chinese counterparts feeling confused and frustrated.

Coop Feasible

**The US and China look towards cooperating on Space Policies.**

**Morring, Aviation Week senior space editor, & Perrett, Aviation Week Asia- Pacific Bureau Chief, 9**

(Frank, Jr., & Bradley, 11/23/09 Aviation Week & Space Technology, 00052175, 11/23/2009, Vol. 171, Issue 19:”New Topic” EBSCOhost, accessed 7/1/11, BLG)

**"The United States and China look forward to expanding discussions on space science cooperation and starting a dialogue on human spaceflight and space exploration, based on the principles of transparency, reciprocity and mutual benefit," says the statement, which was hammered out in advance of Obama's visit. "Both sides welcome reciprocal visits of the NASA administrator and the appropriate Chinese counterpart in 2010." The talks could lead to a role for China on the International Space Station, and possible rides to space for U.S. astronauts on China's Shenzhou spacecraft.** John Holdren, Obama's science adviser, has publicly raised the idea of the latter, while Wang Wenbao, director of the China Manned Space Engineering Office, has left open the possibility of the former (AW&ST Sept. 28, p. 24). But even the language of the joint statement suggests many hurdles face a reprise of the U.S.-Russian space merger that came at the end of the Cold War. For starters, it isn't clear on either side of the Pacific just exactly who an "appropriate Chinese counterpart" for Bolden would be.

**China has progressed to the point where cooperation would be helpful**

**Morring, Aviation Week senior space editor, & Perrett, Aviation Week Asia- Pacific Bureau Chief, 9**

(Frank, Jr., & Bradley, 11/23/09 Aviation Week & Space Technology, 00052175, 11/23/2009, Vol. 171, Issue 19:”New Topic” EBSCOhost, accessed 7/1/11, BLG)

**China stands to gain a lot from cooperating with NASA as it pushes its human-spaceflight effort, and not just in terms of the U.S. agency's long experience. But China's growing skills, deep pockets and desire to overcome the fallout from the ASAT test in negotiations at the Conference on Disarmament in Geneva and elsewhere make it more of a two-way street**. "Military control over the Chinese program is not the only factor," says a U.S. government official in Beijing. **"There has always been a feeling that cooperation would mean us helping them far more than they could help us, because we have been so far ahead. But China has come a long way. The relationship can now be much more balanced than it could have been in the past. China has more to offer." But first, "we need to learn to work with China before we push all the chips in," says Joan Johnson-Freese of the U.S. Naval War College**, an expert on China's space program. At this point, a period of "deciphering intentions" would be in order, she says, noting that it isn't a foregone conclusion that China's space experts are ready to throw their lot in with the U.S. and its other space partners. "The lesson from history is that the process of cooperating with post-Soviet Russia was a long and difficult one, and it was really through the shuttle-Mir program that we built our current foundation," Pace says of the program that sent space shuttles to Russia's Soviet-era Mir orbital station. "That took a decade of hard work. I think people should be appropriately realistic about how long and difficult it will be."

Coop Feasible – Empirically

Sino-US space cooperation before, China launched U.S. made satellites

Denny, retired US Naval Officer, Master in Science and Space Studies, 8

(Bart L., retired U.S. Naval Officer, continue my interest in the national security arena, Associate's Degree in Nuclear Technology, a Bachelor's Degree in Economics and Political Science, finished a Master of Arts in National Security Studies. , “international cooperation in human spaceflight: lessons learned from Russian participation in the international space station project,” bartdenny.com, <http://www.bartdenny.com/iss-lessons-learned.html>) KA

The “Continental System” in an Era of Globalization

The United States began imposing restrictions on space exports to China during the Cold War era. At the time, satellite and other space materials fell under the Coordinating Committee for Multilateral Export Controls’ (COCOM)1 industrial product list. To launch U.S.-made satellites or purchase relevant satellite materials made by COCOM members, China needed to secure COCOM approval. The legal basis for current U.S. regulations of satellite exports to China is the Foreign Relations Authorization Act of FY 1990 and 1991. This act forbids the use of Chinese rockets to launch U.S.-made commercial satellites. Consequently, an agreement was reached between the United States and China whereby an exemption must be obtained from the U.S. president for any U.S. commercial satellite to be launched by China. Moreover, the agreement stipulated that Chinese Customs cannot perform security inspections on U.S.-made satellites when they enter Chinese territory.2 While the satellites are inside China, the United States should implement 24-hour monitoring on the security of such satellites. During the administrations of George H.W. Bush and Bill Clinton, the mainstream view held by the U.S. government was that utilizing China’s low-cost space launch capacity would help strengthen U.S. business competitiveness and expand the market share of U.S. satellites. As a result, the United States adopted a fairly liberal approach to the issue of satellite exports to China. The dispensing power was exercised several times to allow the use of Chinese rockets to launch U.S.-made satellites.

Coop Feasible – AT – NASA Won’t Coop

NASA has no internal objections to working with China

Aerospace Daily & Defense Report 9

(“Support Building For Human Spaceflight Cooperation With China” What's Ahead in Aerospace & Defense; Pg. 1 Vol. 232 No. 18 8-26-09 lexis) TJL

LIKE MINDS: Support for U.S./China cooperation in human spaceflight is growing, with the Augustine panel on the future of U.S. human spaceflight the latest to weigh in. «It is the view of the Committee that China offers significant potential in a space partnership,» the panel notes in its final report, citing China’s success with human spaceflight and its plans to build a space station with the new Long March V launch vehicle. Within the Obama administration there is a faction that would like to see a reprise of the U.S.-Russian cooperation that started in the early 1990s. John Holdren, President Barack Obama’s science advisor, in a published interview has left open the possibility of U.S. astronauts flying on China’s Shenzhou spacecraft, and he’s discussed the idea with NASA Administrator Charles Bolden. «John and I are of like minds,» Bolden says.

**Bolden is ready to work with China on space policies.**

**Morring, Aviation Week senior space editor, & Perrett, Aviation Week Asia- Pacific Bureau Chief, 9**

(Frank, Jr., & Bradley, 11/23/09 Aviation Week & Space Technology, 00052175, 11/23/2009, Vol. 171, Issue 19:”New Topic” EBSCOhost, accessed 7/1/11, BLG)

**Human spaceflight in China under Wang's office and the operational China Manned Space Engineering Program is funded by the military, while in the past NASA has conducted its cooperative activities with the civilian China National Space Agency** (CNSA). But the CNSA "is more of a public relations office than an administrative body," according to Gregory Kulacki, an expert in the Chinese space program with the Union of Concerned Scientists. "That is why a meeting between Administrator Bolden and the head of CNSA would be inappropriate," Kulacki says. "They are not equals. Moreover, a meeting between a U.S. NASA administrator and the PLA [People's Liberation Army] officer in charge of the Chinese Human Space Flight Program would also be inappropriate, since NASA is a civilian body. This is why the language in the joint statement is vague**." Bolden, a retired Marine major general and former space shuttle commander, says he is ready to work with China on human spaceflight. "I am perfectly willing, if that's the direction that comes to me, to engage the Chinese in trying to make them a partner in any space endeavor,"** Bolden told reporters in Tokyo, where he was holding talks with the Japan Aerospace Exploration Agency (JAXA). "I think they're a very capable nation." In the joint statement China and the U.S. note their "rich achievements in scientific and technological cooperation" over the past 30 years--an often-uneasy arrangement bounded on one side by U.S. tracking assistance for Shenzhou flights and by outrage over the orbital-debris cloud released by China's January 2007 anti-satellite (ASAT) weapon test on the other.

**Coop Feasible – AT – Suspicions (1/2)**

**US-Sino space Coop possible despite suspicions – Soviet coop proves**

Seedhouse, aerospace scientist & PhD from German Space Agency's Institute of Space Medicine, 10

[Erik, aerospace scientist & PhD from German Space Agency's Institute of Space Medicine , “The New Space Race: China vs. the US” Springer and Praxis Publishing Co., <http://www.scribd.com/doc/31809026/The-New-Space-Race-China-Vs>, page 215, accessed6/31/11, HK]

On certain diplomatic levels, the Sino US relationship is similar to the one that existed between the Soviet Union and the US more than lour decades ago. In 1962.at the height of the Cold War. few would have predicted the possibility of a joint spaceflight, but just 10 years later, a bilateral agreement led to the docking of Soyuz and Apollo spacecrafts. While the Apollo-Soyuz Test Program (ASTP) was undoubtedly a significant political and historical event, many analysts still harbored fears about the Soviet Union's ultimate intentions, even after astronaut Thomas Stafford and cosmonaut Alexei Leonov shook hands on July 17th. 1975. Given these suspicions, few would have believed the unprecedented level of cooperation that took place during the Shuttlc-Mir era between 1994 and 1998. During this timeframe, American astronauts spent nearly 1,000 days living in orbit with Russian cosmonauts onboard the Russian space station. Mir (Figure 9.2). The Shuttle Mir program, which witnessed 10 dockings of the Space Shuttle with Mir, not only prepared the way for the ISS. but began an era of cooperation seldom seen in human history. Less than a decade after the end of the Shuttle Mir program, it was the Russian Soyuz capsule that assured access to space for NASA astronauts following the *Columbia* accident in 2003. It was an outcome few could have predicted. The point is that it is impossible to predict the future, just as it is impossible to know if or how Sino-US relations might develop. The Soviet-US lesson has taught us that despite fears about the Soviet Union's intentions, informed decisions were made about how the Soviet Union and the US might cooperate in space. These decisions ultimately resulted in a productive international partnership that served to build confidence between the two nations and advanced space exploration. How-such a level of cooperation and agreement may be achieved between China and the US is as difficult to predict as the ASTP and the Shuttle Mir program, but there are some policies and guidelines that, if followed, may enable such collaboration to be realized.

**Coop Feasible – AT – Suspicions (2/2)**

Coop can work – despite tensions – Soviet coop proves

O’Neil, Discovery News, 8

(Ian, Discovery News Space Science Producer, Discovery News, “Griffen: China Could Beat US in Moon Race”, 1/15/8, <http://www.universetoday.com/15559/griffin-china-could-beat-us-in-moon-race/>, accessed 6/30/11, CW) \* Michael Griffen: Physicist, aerospace engineer, and former NASA administrator.

More bad news for NASA: even their administrator thinks China could beat the US to the Moon. Speaking with the BBC today, Michael Griffin shared his views about the Chinese space aspirations, pointing out that the super-state could, if they wanted to, send a manned mission to the lunar surface within a decade. NASA’s return mission to the Moon is planned to launch, at the earliest, in 2020, so this news is bound to knock the wind out of the US space agency’s hopes to continue where it left off in 1972… In the last five years, China has been teetering on the edge of a full-manned space program. In 2003, the nation became only the third country to put a national into space (following the Russia and the USA), blasting Yang Liwei into orbit for 21 hours on the Shenzhou 5 spacecraft. Shenzhou 6 was launched with two astronauts (or “taikonauts”) on board, spending five days orbiting the Earth in 2005. This year, shortly after the Beijing Olympics in October, China is sending another manned mission into orbit, only this time it is hoped a spacewalk will be possible. With this rapid succession of successful manned launches, it comes as no surprise that attention is swinging away from NASA and to China for the next big step into space. The last time man set foot on the Moon was in 1972 when Eugene Andrew Cernan, last man on the Moon, boarded the Apollo 17 lunar module. That was 36 years ago and space flight has changed significantly since then, now NASA has more competition, as highlighted by Griffin during a visit to London: “Certainly it is possible that if China wants to put people on the Moon, and if it wishes to do so before the United States, it certainly can. As a matter of technical capability, it absolutely can.” – Dr Michael Griffin As to whether it actually matters whether China are the next to land on the Moon is open to interpretation. After all, the first nation to set foot on Earth’s natural satellite was the USA, so is a return trip a big psychological “victory” for China? “I’m not a psychologist, so I can’t say if it matters or not. That would just be an opinion and I don’t want to air an opinion in an area that I’m not qualified to discuss,” Griffin added. Recently, there has been increased cooperation between the US and China when sharing science and information. “We do have some early co-operative initiatives that we are trying to put in place with China, mostly centred around scientific enterprises. I think that’s a great place to start,” he said. Although many will view an early Chinese lunar mission as a NASA failure, both nations appear to be trying to forge close relationships that could possibly lead to joint space missions in the future. After all, even at the peak of the Cold War, the US and Russia began working on a common goal. “I think we’re always better off if we can find areas where we can collaborate rather than quarrel. I would remind your [audience] that the first US-Soviet human co-operation took place in 1975, virtually at the height of the Cold War. And it led, 18 years later, to discussions about an International Space Station (ISS) programme in which we’re now involved.” – Dr Michael Griffin Regardless of who gets to the Moon first, Griffin will be feeling the pressure of the “five-year gap” between the Shuttle being retired in 2010 and Constellation completion in 2015, there is still little alternative than relying on Russia and Europe for US access to space. Griffin has tried to increase Constellation funding by $2bn to bring completion forward by a year, but the application was quickly turned down by Congress. Those five long years may be more costly than the US government realizes as NASA loses more footing in manned access to space…

Coop Solves – Spills Over To Relations

Having peaceful and cooperative dialogue in regards to space fosters good US-Sino relations that solve extinction

Hays, retired Airforce Lieutenant Colonel, 9

(Peter L., senior policy analyst supporting the plans and programs division of the National Security Space Office “Space and Sino-American Security Relations” <http://web.mac.com/rharrison5/Eisenhower_Center_for_Space_and_Defense_Studies/Journal_Vol_2_No_3_files/Space%20and%20Defense%202_3.pdf> SPACE and DEFENSE Volume Two Number Three Winter 2009 accessed: 6/28/11 pg 18) TJL

Addressing four issue areas can help provide context and focus for these concerns: contrasting Chinese and American views of space and comparing the place of space during the Cold War with its role in the current global security environment; reviewing the evolution of security space capabilities and superpower space arms control; evaluating the role of space capabilities in Sino-American security interrelationships, particularly with respect to a potential conflict over Taiwan; and assessing the prospects for a range of possible cooperative ventures and transparency- and confidence-building measures (TCBMs). Defusing space apprehensions will be difficult and there are currently several worrisome trends, but space holds unique potential to help define the Sino-American security relationship and shape the very future of humanity. If Beijing and Washington can work towards resolving or at least lessening space tensions they will not only better manage their overall relationship but also open more opportunities to use space for the benefit of all humanity through pursuit of genuinely cooperative spacepower objectives such as joint science and exploration missions, generating wealth in space, harvesting energy from space, and, ultimately, improving the odds for humanity’s survival by better protecting Earth and creating capabilities to become a multi-planetary species.

Space co-operation with China will spill over and solve globally

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 60) EK

However, the more pathways to government-to-government communication and confidence building that can be built in the space communities, the better. As mentioned, Europe has already pursued this path in their relations with China through Double Star and the Dragon Program. U.S. policymakers would be advised to at least study the progression of these programs to examine the risks, benefits, and outcomes of such cooperation. If deemed positive to U.S. goals, Europe may be willing to join with the U.S. and China in creating a new international space-based science venture, which could provide an informal mechanism to expand communication and cooperation. Furthermore, by forging ahead with cooperative measures in space, the U.S. can begin to construct space as a medium for cooperative international engagement, which will have an impact beyond near-term bilateral relations with China.

Coop Solvency – Now Key to Influence Chinese Space Policy (1/2)

Status quo is not utilizing U.S. influence on China’s future space policy

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 48-49) EK

There are a number of policy implications that can be drawn from this analysis, but two stand out as most important for U.S. policymakers. First of all, as the typology should illuminate, there are a variety of ways in which China’s space program can threaten U.S. interests, aside from just the weaponization of space. Second, the above analysis should also highlight that, even if the U.S. pursues the weaponization of space, China will quickly follow. Optimistically, it seems as though the Obama administration has recognized the threats emanating from foreign civilian, diplomatic and commercial space activities, while still remaining cognizant of the importance of military space threats. Indeed, the administration has developed a policy approach that lays a foundation for addressing the near-term issues raised by China’s multi-track policy approach—one that responds with a multi-track approach. Although a positive step in addressing China’s rise as a spacefaring nation, this strategy overlooks the ability of U.S. policymakers to influence China’s policy decisions. This is an advisable strategy since China has yet to drive full force toward a single goal. The U.S. should utilize its leadership role and preeminence in space to shape the future of the domain and finesse Chinese leaders into a space policy that is more amicable to U.S. interests.

China space policy directly influenced by U.S.

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 55) EK

The U.S. has greater influence over China’s space program that policymakers seem to realize. “Beijing’s view of the heavens is not the same as Washington’s; indeed, when Beijing looks into space, its view is largely obscured by U.S. assets. The actions, assets, and rhetoric of the United States given China even more discomfort than Europe, Russia, Japan, or others feel.” 171 This is because the U.S. is currently the preeminent space power in the areas China is most interested in. The U.S is also the only nation that seems to have the technology, experience, and resources to shape the way outer space as a domain progresses. Whether the U.S. wants to weaponize space, send a manned mission to Mars, or dominate the international commercial space market, few would doubt the U.S.’s ability to do so. Therefore, in the eyes of the Chinese, the U.S. is both the country to emulate as well as the country to beat in space. China, however, cannot yet achieve at the same level of the U.S., so therefore must set its resource and political goals carefully. Its strategy of hedging for the future is in one sense a way to avoid making these decisions before the U.S. has decided its own path in space. Only after the U.S. has set a course can China decide how best to tailor its space program in response. Given this close relationship, it should become clear to U.S. policymakers that the decisions they make now will inexorably influence how China progresses as a space power.

Coop Solvency – Now Key to Influence Chinese Space Policy (2/2)

Status quo is creating a security dilemma – now is key for U.S. leadership

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 62) EK

Not being proactive and assuming the status quo is sufficient is a dangerous policy. The U.S. and China are locked in mindset of mutual suspicion. Chinese leaders are allowing the Space Dragons to research and design counterspace weapons because they believe the U.S. will inevitably weaponize space. The U.S. takes China’s ASAT program and other questionable space missions as an affront to its space dominance and a potent threat to its space assets. If the U.S. does not become more proactive in shaping China’s thinking on space, by engaging it in ways like those discussed above, and taking the lead in shaping space as a cooperative environment, the status quo can quickly deteriorate into a security dilemma. Furthermore, one cannot assume the U.S. will be the leader in space forever. Avoiding action now could mean that in the future the U.S. will be faced with the inability to shape outer space as a domain or influence Chinese space policy to the same degree, a dangerous prospect for U.S. interests.

U.S. is key to future Chinese space policy – now is key

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 54-55) EK

The downside of the NSP and NSSS is that they are reactive policy documents, not proactive, as they primarily outline policy responses to threats that are already coming to the fore instead of proposing ways to shape the future threat environment in space. The U.S. currently holds the most capability to shape how space will develop in the coming decades and should fully embrace this role while it can, particularly with regards to China. As shown in the above analysis, China attaches great importance to U.S. rhetoric and actions and the U.S. will continue to play a decisive part in China’s decision making in space moving forward. In other words, since China’s multi-track policy approach is hedging its bets until space is better defined, the U.S. has a unique opportunity to shape both outer space as a domain, and China’s future policy objectives.

U.S. space policy now is key to solve weaponization, relations and U.S. competition.

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 62-63) EK

Which end goals the Chinese leadership decides to fully pursue depends foremost on the actions the U.S. takes now and in the coming decades. The space policy documents released under the Obama administration sufficiently recognize the multi-faceted threat that China’s space policy can present and lays a foundation for addressing them. Proper implementation of these policies should now be the top priority. The NSP and NSSS do not, however, suggest a road ahead for proactively shaping other countries’ space policies. U.S. policymakers need to utilize the power and space preeminence of the U.S. now, while it still has it. By doing so the U.S. can temper mutual suspicion, avoid a spiral towards the weaponization of space, and invigorate the U.S. for the growing competition in other space mission areas.

Now Key – Space Dragons (1/2)

Now is key – waiting will cede power to China

Houpt, Master of Arts, Security Studies, Georgetown, 2011

(Daniel M., 4-15-11, “DOES CHINA HAVE A COMREHENSIVE, COORDINATED, AND CONSISTENT SPACE POLICY? IMPLICATIONS FOR U.S. POLICYMAKERS” A Dissertation submitted to the Faculty of the Graduate School of Arts and Sciences of Georgetown University in partial fulfillment of the requirements for the degree of Master of Arts in Security Studies, pg. 62 ProQuest, accessed June 29, 2011, EJONES)

Not being proactive and assuming the status quo is sufficient is a dangerous policy. The U.S. and China are locked in mindset of mutual suspicion. Chinese leaders are allowing the Space Dragons to research and design counterspace weapons because they believe the U.S. will inevitably weaponize space. The U.S. takes China’s ASAT program and other questionable space missions as an affront to its space dominance and a potent threat to its space assets. If the U.S. does not become more proactive in shaping China’s thinking on space, by engaging it in ways like those discussed above, and taking the lead in shaping space as a cooperative environment, the status quo can quickly deteriorate into a security dilemma. Furthermore, one cannot assume the U.S. will be the leader in space forever. Avoiding action now could mean that in the future the U.S. will be faced with the inability to shape outer space as a domain or influence Chinese space policy to the same degree, a dangerous prospect for U.S. interests.

Window is now – China has not handed the space reins to the Space Dragons yet

Houpt, Master of Arts, Security Studies, Georgetown, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 48) EK

Yet another explanation of these events could be bureaucratic confusion and the outcome of a stove piped institution in which inter-governmental communication is neglected. This no doubt plays a heavy part in many actions China takes, including in its space program. However, the discrepancies in China’s space policy have become clear enough at this point that the leadership, if they saw inconsistency as a problem, would have already begun to bring their policies into harmony. There is little visible evidence to suggest they have done so. The inconsistencies in China’s policy are clear, and yet there is little indication that the CCP is trying to reconcile them. Since there has also been no sign of China marginalizing its space program in favor of a particular policy path, one cannot now conclude that the Space Dragons, or any particular interest group, has paramount influence. Indeed, China actively sought to ensure that the different mission areas maintained course in the aftermath of the 2007 ASAT test. The evidence does, however, suggest that China’s space policy is indeed on a calculated multi-track approach, one that is guided by China’s top leadership

Now Key – Space Dragons (2/2)

Space Dragons influence in China would threaten China’s space program, increase possibility of conflict and ruin space research.

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 42-43) EK

If Space Dragons indeed have a significant influence on the policymaking bureaucracy, and begin to pursue their policy goal of gaining a military advantage, their policies can also irreconcilably complicate the other aspects of China’s space program as well. Space weaponization could make space an unsafe domain for fielding commercial satellites, launching civilian missions, and even threaten a manned space station, if the prospects of a conflict in space become more real. Not only could debris and other secondary impacts of such conflict indirectly threaten space assets, but certain platforms—especially commercial satellites, such as those for communication or imagery—could be directly targeted if determined to be aiding the enemy’s war fighting effort. Debris that could be caused by direct ascent weapons, like those that China tested, would also increase the risk to assets that China and other nations can field in space, thus potentially putting a cap on how much the world can gain from space. Clearly, these consequences would irreconcilably complicate the policy goals of Commercial Leaders and Audience Pleasers.

China’s Space Dragons’ policies threaten U.S. and calls for space weaponization

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 35-36) EK

Space Dragons draw from Space Hawks and Inevitable Weaponizers and, based on available sources, represent what seem to be the most pervasive views in the PLA. Space Dragons believe that that the U.S. will inevitably weaponize space and that future combat scenarios will rely heavily on space as a domain of war. Therefore, in their view, China needs to pursue the weaponization of space to either pre-empt U.S. dominance, or be able to seriously challenge it. This group believes that military power and national security are of the utmost importance and that pursuit of this policy should be undertaken regardless of the costs to other internal space programs.

\*\*\*AT – Coop Bad – Militarization Turn

Non Unique – Espionage Now

**Espionage and tech transfer non-unique – China gets tech now**

**Domme, Center for Strategic International Studies, Technology and Public Policy Program intern, 10**

(Lisa, Center for Strategic International Studies, “Chinese Space Policy: Collaboration or Competition?”, March 23, <http://csis.org/blog/chinese-space-policy-collaboration-or-competition>) PG

General Xu Qiliang, the commander of the People’s Liberation Army Air Force, has argued that **space exploration is critical to China’s national security interests. His remarks reflect the Chinese government’s growing interest in space exploration and the development of space technology.** China’s space program has made significant progress over the past decade. China is scheduled to start building its own space station in 2011 with the launch of an unmanned module named Tiangong-1. **China’s success is in part due to its ability to exploit (and in some cases steal) foreign technology** and its cooperation with foreign governments.

Status quo isn’t preventing tech transfers

Logan, Specialist in energy policy, Congressional Research Service 9-29-08

(Jeffrey has a M.S. in environmental science and Master in Public Administration,1995, Indiana University, School of Public and Environmental Affairs B.S. in aerospace engineering and B.A. in general arts and sciences, 1985, Pennsylvania State University <http://www.fas.org/sgp/crs/row/RS22777.pdf> “China’s Space Program: Options for U.S.-China Cooperation,” pg. 6, accessed: 6-28-11) TJL

Cost savings. China now has the economic standing to support joint space cooperation. Cost-sharing of joint projects could help NASA achieve its challenging work load in the near future. Some have argued that U.S. space commerce has suffered from the attempt to isolate China while doing little to keep sensitive technology out of China.

Can’t Spy Through Coop

China cannot be singled out for spying through its human exploration missions, and even if China was spying they would use satellites like everyone else

Xianqi, professor at the Institute of Command and Technology, and Junqin, PhD candidate at the Institute of Command and Technology, 6

(Maj. Gen. Chang and Maj. Sui “Active Exploration and Peaceful Use of Outer Space” accessed: 6-30-11 [http://www.chinasecurity.us/index.php?option=com\_content&view=article&id=244) TJL](http://www.chinasecurity.us/index.php?option=com_content&view=article&id=244)%20TJL)

Two problems exist in the viewpoints mentioned above. First, it is unnecessary for China to use a manned spacecraft in order to undertake reconnaissance. Unmanned space vehicles can, of course, observe the ground from space; this is one function of China’s application satellites, e.g. meteorological, resource observation and disaster monitoring satellites. China has possessed this technology for a long time, and it can be deployed entirely on satellites. Thus, it is not necessary to perform ground observation by manned spacecraft with limited payloads. Second, singling out China for such attention is illogical. Nations other than China have utilized Earth observation capabilities for reconnaissance purposes. Furthermore, the major space-faring powers launch numerous Earth observation satellites each year and their precision is improving. Do these not pose larger threats to the safety of other countries? In addition, there are other countries that have carried out manned space flights for many days and also have space stations in orbit year-round. Do these not also pose greater military threats to other countries? This rationale is analogous to stating that a sovereign country has no right to possess Earth observation technology.

Can’t Spy Through Coop – Military and Civilian Separated

No risk to cooperating with China – coop with Russia proves

Goddard, freelance foreign correspondent for British national newspapers including The Times, Sunday Telegraph and The Scotsman, 2011

(Jaques, “Lost in Space,” South China Times, <http://events.scmp.com/news/content/LastSpaceShuttle/home.html#popupswf>, July 8, accessed July 9, 2011, NS)

Space centre worker Terry White helped to build the shuttle Columbia in the 1970s.

"There will be another space race but I don't think it will be the activity it was back then with just two powers," he said, standing in the orbiter processing facility at space centre beside the shuttle Discovery, which is being decommissioned along with the Endeavour ready for museum display.

"Everyone's going to have to catch up to the Chinese ... the Chinese are the ones who are really marching down that road to the moon now."

Nasa head Major Charlie Bolden sees China not so much as a threat to US pre-eminence in space as a potential future partner. But under a clause inserted into a 2011 funding bill passed by Congress in April, he is banned from entering into any such partnership in the current fiscal year.

The congressman who wrote the wording, Republican Frank Wolf, wants to make it permanent. "Most countries expanding their space programmes are strong US allies that are primarily interested in advancing science research or building a commercial space industry. The Chinese, however, do not fall into this category," he reasoned at the time.

He noted the "surprising pace" at which China is developing its space programme, launching its first astronaut into orbit in 2003, performing its first spacewalk in 2008, unveiling plans earlier this year for a space station in low-earth orbit, and in March announcing plans for a heavy-lift rocket capable of launching manned missions to the moon and beyond.

Voicing his fears that China is working to a military-driven agenda, he added: "The US has no business co-operating with the [People's Liberation Army] to develop its space programme."

Leroy Chiao, 50, a former Nasa astronaut of Chinese descent, told the South China Morning Post (SEHK: 0583, announcements, news) : "I don't know how else to characterise this but good old-fashioned xenophobia and isolationism. Charlie [Bolden] is very much a believer in international co-operation, as am I, and President Obama and the White House scientific adviser John Holdren.

"I think all of us believe that we should constructively engage countries like China, especially in a civil space programme, just as we have done with the Russians. We were mortal enemies with the Soviet Union and here we are working with them in the most ambitious civil space project, the International Space Station, for two decades."

Chiao, whose parents are Chinese, left Nasa in 2005 after three shuttle missions and a turn as commander of the space station. In 2006, he was the first American allowed inside China's Astronaut Research and Training Centre.

"I don't believe there's any need to fear China's civil space programme. It doesn't advance their military space programme if the US were to co-operate with them in civil space - for example, have them join the ISS and learn how to co-operate in space conducting research."

In 2009, Chiao served on the independent panel set up by Obama to review the US manned space programme. One of its suggestions was that international co-operation in space should be expanded.

Chiao is keen for the US to engage China and others on future lunar activities, such as testing rovers on the moon, as part of an international push beyond low-earth orbit.

"What will happen if we don't? We would take steps backwards, as some members of Congress are already doing," he said. "China could very well be the second country on the moon."

Can’t Spy Through Coop – No Disclosure

U.S. does not have to reveal key plans or strategies

Kennedy, advocate with the Space Frontier Foundation, 11/14/10

(Jack, “Guest column: ‘Envoys of mankind’ deserve benefits of Astronaut Rescue Treaty”, InsideNova.com, <http://www2.insidenova.com/news/2010/nov/14/envoys-mankind-deserve-benefits-ar-651129/#fbcomments>, accessed 6/30/11) EK

Like Nixon, it may be that Congressman Wolf is the more appropriate person to open this door to the future in Chinese-American space relations and to suggest some space détente rescue pact among American, Chinese, Indian and Russian space agencies. Cooperation does not have to be difficult; human spacefaring nations need cooperation on ship-to-ship communication protocols, docking ports, oxygen and water hose sizes, and the like to save the lives of those opting to spaceflight in the decades ahead. The United States need not transfer the designs of our booster rockets, the next spacecraft design or compromise national security technology transfer concerns to accomplish a mutual rescue-in-space plan. The United States need not wait for the siren call of a Titanic-like space mishap to determine if we have measured up to the spirit of international space law. We need not determine the ethnicity of envoys of humanity to determine if they are worthy of a space rescue.

Won’t Militarize – Private Sector

China wants cooperation, and US private industry will ensure China doesn’t gain competitive edge from cooperation

Hill, Satellite today news editor, 2011

(Jeffery, “Analysts: Musk's Response to Launch Price Doubt Reveals Clues to SpaceX's Business Strategy,” Satellite News, <http://www.satellitetoday.com/commercial/launchers/Analysts-Musks-Response-to-Launch-Price-Doubt-Reveals-Clues-to-SpaceXs-Business-Strategy_36735.html>, May 11, accessed July 6, 2011, NS)

China Great Wall, which functions as the marketing arm of CAST, is currently developing plans to open a Washington D.C. office this summer to promote Chinese space products and solar arrays. China has long hoped to revive bilateral space relations after a U.S. policy shift in 1999 prohibited the United States from trading space-related technology with China. Musk said that Fanpei's statement only validated the United States' advantages over China's space sector. "China has the fastest growing economy in the world. But the American free enterprise system, which allows anyone with a better mouse-trap to compete, is what will ensure that the United States remains the world's greatest superpower of innovation." According to Musk and additional information provided on SpaceX's website, the price of a standard flight on a Falcon 9 rocket is $54 million. The average price of a full-up NASA Dragon cargo mission to the International Space Station is $133 million including inflation, or about $115 million considering the current U.S. dollar value. SpaceX maintains that the company has been profitable every year since 2007, with more than 40 flights on its manifest representing over $3 billion in revenues. "Because SpaceX is so vertically integrated, we know and can control the overwhelming majority of our costs. This is why I am so confident that our performance will increase and our prices will decline over time, as is the case with every other technology," said Musk. "We have a firm, fixed price contract with NASA for 12 missions. This price includes the costs of the Falcon 9 launch, the Dragon spacecraft, all operations, maintenance and overhead, and all of the work required to integrate with the Space Station. If there are cost overruns, SpaceX will cover the difference. This concept may be foreign to some traditional government space contractors that seem to believe that cost overruns should be the responsibility of the taxpayer."

[Note: Musk= Space X founder, CTO and CEO]

Won’t Militarize – Tech Incompatible

Even if China gets a hold of our technology, they can’t use it

Paarlberg, Wellesley College Professor of Political Science, 4

(Robert L, Professor of Political Science at Wellesley College and Associate at the Weatherhead Center for International Affairs at Harvard University, “Knowledge as Power: Science, Military Dominance, and U.S. Security,” International Security, 29.1 (2004) 122-151, accessed on 7-8-11, <http://muse.jhu.edu/journals/international_security/v029/29.1paarlberg.html>, JSkoog)

Potential rivals such as China cannot hope to develop an RMA capability through simple transfer, whether by purchase or theft. Through espionage China may have been able to gain information on the W-88 warhead used on U.S. Trident missiles, and China was nearly successful in purchasing from Israel the Phalcon system (which contained modern phased-array technology) before the U.S. government halted this sale in 2000.64 Yet even with access to such imported or stolen technology, the Chinese military system will not be able to advance to an RMA capability, given the notorious weakness of the PLA in areas such as command, control, communications, and intelligence. [End Page 142]

Fears that China would steal technology are irrelevant- self-reliance and different standards make theft functionally useless

Xiaobing, researcher at China Institute of Contemporary International Relations, 06

(Guo, recently was a visiting scholar at the University of Georgia’s Center for International Trade and Security, ChinaSecurity, “Blockade on China or the United States? U.S. Regulatory Policies on Space Technology Exports to China,” Issue 2, accessed: 6-29-11 <http://www.chinasecurity.us/index.php?option=com_content&view=article&id=249&Itemid=8>) TJL

The second concern is that China will use trade in the space sector to obtain U.S. ‘technology secrets.’ However, several factors have made this increasingly irrelevant. A guiding principle of China’s space program development is self-reliance and attaining independent intellectual property rights for space technology. China’s achievements in manned space flight and satellite research and development have amply demonstrated its independent R&D prowess. China does not need to rely on U.S. technology to make progress. Furthermore, it would be difficult to integrate outside technology with China’s own, as China has developed its own standards for rockets and satellites.

\*\*\*AT – Off Case Args

Topicality – Space Exploration/Development

US-China cooperation would solve for funding, exploration and technology; it’s necessary for further space developments

Rutkowski, master’s degree candidate at the School of Advanced International Studies specializing in economic cooperation with China, 2009

(Ryan, “US-China Cooperation in Manned-Space Exploration,” Middle Path, <http://rrutkows.blogspot.com/2009/02/us-china-cooperation-in-manned-space.html>, February 21, accessed July 7, 2011, NS)

However, the continued reluctance to pursue U.S. and China space cooperation, ignores the benefits of such cooperation, namely promote mutual understanding, cost savings, improved transparency, and ensuring long-term gains in human space exploration. Similar with US-Russian cooperation, US-Chinese space cooperation will allow for a cultural exchange through collaboration with US and Chinese astronauts and scientists. China could be a vital source of funding to reduce the rising costs for an expanding U.S. space program. Indeed, China and the US could collaborate on joint-projects, such as ISS or even a lunar base that could help reduce the cost of investment in space exploration for both countries. US-China space collaboration would also reduce security tensions, especially in space-based weapons, by increasing transparency of the long-term intentions of both countries in space technology. Finally, U.S. and Chinese civilian space programs could recognize a common purpose and commitment to the development of space technology to promote progress in human space exploration to the moon, mars, and beyond.

U.S-China space cooperation is vital to future progress in space technology and space exploration. The U.S. and China could engage in non-sensitive data and information sharing from satellites, such as debris management, environmental and meteorological conditions, and navigation. The two countries could also engage in a space policy dialogue similar to the annual strategic economic dialogue to build a better understanding of civilian and military space objectives and a common vision for space exploration initiatives. Finally, the U.S. and China could launch bi-lateral and multi-lateral joint-projects with ISS, lunar expeditions, and eventual mars exploration. Ultimately, the future of U.S.-China space cooperation is a necessity for continuation of human progress in exploring our planet, solar system, and worlds beyond.

Topicality – Space Exploration

Exploration includes international coop

Messina, ESA Directorate of Human Spaceflight, Microgravity & Exploration, 7

[Piero, 5-30-7, ESA Portal, “Key meeting on long-term space exploration”, <http://www.esa.int/esaCP/SEMARH9RR1F_index_0.html>, accessed 6-30-11]

Space exploration is a top priority for many space agencies around the world and many other space organisations are interested by the growing number of cooperation opportunities.

ESA and ASI have therefore decided to jointly organise a series of regular meetings with the aim of contributing to the discussion on cooperation, and providing an opportunity for exchange of information and coordination.

One first tangible outcome of this collective effort by the many space organisations from Europe, North America, Asia and Australia, is a document laying down the common vision of the space exploration leaders.

'The Global Exploration Strategy: the Framework for Coordination', which is the title of this collective paper, will be extensively addressed at the Workshop's opening session, and will form the basis for the ensuing discussions that will focus on the implementation of a coordination mechanism.

Europe’s Aurora Exploration Programme, the US Vision for Space Exploration, Japan’s plans for future exploration activities, as well as ambitious automatic missions being prepared by nations like Russia, India and China, offer numerous opportunities for scientific and technological cooperation.

The very nature of space exploration with its long-term goals and political and technological challenges call for a more structured international cooperation approach.

Coop is part of normal means of exploration

Moskowitz, Space.com senior writer, 10

[Clara, 4-29-10, Space.com, "Future Space Exploration Hinges on International Cooperation, Astronauts Say," <http://www.space.com/8297-future-space-exploration-hinges-international-cooperation-astronauts.html>, accessed 7-10-11]

Former NASA astronaut Tom Henricks, a veteran of four space shuttle missions, agreed. He said that the future in space will require much more collaboration between countries than there's been in the past. "I don't think any major effort in space will again be done by a single nation," Henricks said. "They may each have individual sub goals, but it's a human endeavor to go to Mars, and I think that's the way it needs to be approached."

Cooperation is a prerequisite to Mars exploration

Svitak, Space News, 5-4-11

[Amy, Space News, “China Viewed as Potential U.S. Partner in Future Mars Exploration”, http://www.spacenews.com/policy/110504-china-partner-mars-exploration.html, accessed 7-10-11]

U.S. President Barack Obama views China as a potential partner for an eventual human mission to Mars that would be difficult for any single nation to undertake, a senior White House official told lawmakers.

Testifying May 4 before the House Appropriations commerce, justice, science subcommittee, White House science adviser John Holdren said near-term engagement with China in civil space will help lay the groundwork for any such future endeavor. He prefaced his remarks with the assertion that human exploration of Mars is a long-term proposition and that any discussion of cooperating with Beijing on such an effort is speculative.

Topicality – Space Development (1/2)

Space development includes international coop

Moskowitz, Space.com senior writer, 10

[Clara, 4-29-10, Space.com, "Future Space Exploration Hinges on International Cooperation, Astronauts Say," <http://www.space.com/8297-future-space-exploration-hinges-international-cooperation-astronauts.html>, accessed 7-10-11]

The final frontier must become more of an international endeavor or space exploration could stagnate, according to three veteran astronauts from two different countries. Only through further collaboration between nations can humanity reach its next major space goals, the spaceflying group — which included a former NASA astronaut, an American space tourist and the first Chinese man to fly into space — said at the 26th National Space Symposium in Colorado Springs, Colo., this month. "I think the development of space endeavors is not for one nation or one country," said Yang Liwei, China's first astronaut. "I myself as an astronaut, I believe that the multinational, the international cooperation is the future triumph of the development of space industry," he said through a translator.

Cooperation includes continual development with China

**Imran, Masters candidate at Universidade Nova de Lisboa, 10**

(Mara, “China's space program : a new tool for PRC "soft power" in international relations?” accessed:7-01-11, <http://run.unl.pt/handle/10362/5473> pg 87-89)TJL

If the United States truly wants to engage China in a positive and productive manner regarding space, this perspective argues that Washington needs to see China as a potential partner and not just as “rival” or “competitor.” As Nicolas Peter notes, “…few if any countries in the world today can stand alone in space activities, demonstrating therefore the importance of cooperation”.307 Although Washington continues to snub Beijing’s request to serve as a partner on the ISS, there may be some actual merit to allowing China to participate in the program. One obvious benefit would be China’s ability to participate financially and allow for some cost-sharing. With its large foreign reserves and sovereign wealth fund, China is in a better position than other ISS participants (e.g., Brazil, Italy) to help offset some of the continual development and sustainment costs. Another potential benefit in Chinese collaboration would be greater insight and transparency into China’s own space program and technical capabilities. Richard Fisher, vice president of the International Assessment and Strategy Center, offered a slightly puzzling, pessimistic argument in favor of denying Chinese participation in the ISS, as follows: When we look to our own potential future cooperation, dialogue, space dialogue with China, we have to keep this [potential for military dual-use purposes] in mind. That when we invite—if we were to invite—a Chinese astronaut onto the space shuttle, that the information technology that that single individual might pick up could be turned into a potential Chinese military space platform.308 There is scant evidence, however, that a man orbiting in space would truly add any significant military advantage, especially concerning information technology. Johnson-Freese dryly noted that neither the Americans nor Soviets could find any particular advantage to having a manned military presence in space and that “there seems little basis for such a fear [that Chinese ingenuity would find value in a military-man-in space that eluded the U.S. military]”.309 On a more optimistic note, space cooperation between NASA and the CNSA, its Chinese counterpart, through increased contact and exchanges of information, could help overcome mutual mistrust and ambiguity. Over the long-term, it could potentially give way to strengthened confidence and assurance of each others’ intentions and concerns about space, reducing ambiguity and increasing transparency across the board. Even during the height of the Cold War, America held a joint space docking exercise with the Soviet Union in 1975 which “achieved important

**[CARD CONTINUES]**

Topicality – Space Development (2/2)

**[CARD CONTINUED, NO TEXT REMOVED]**

technical and political breakthroughs”.310 If the United States could work with its bitter communist rival during the dark days of the Cold War, according to the “space partner” perspective, Washington could safely find a place for Sino-U.S. space cooperation in the 21st century. Working in a more direct fashion with the Chinese, it could be argued, may also help keep their space program directed at peaceful objectives and dampen any secret ambitions to militarize outer space. Even some Chinese scholars would agree on this point, including Wu Chunsi from Fudan University’s Center for American Studies. He suggests that Washington’s active engagement China in space could help create a clean break between the civilian and military programs and that “the commercial and civilian elements of China’s space program will see their capabilities grow along with a sense of independence from the military”.311 Furthermore, Wu argues, “if China follows a path of isolation, exclusion will only deepen its suspicion and resentment, and the commercial and civilian sectors…would be forced to seek help from the government, or even the military”.312 Thus, instead of acting as a “space hyper-power,” a U.S. invitation to the Chinese to become a space partner could arguably soften its image as a global hegemon, and also increase U.S. soft power and credibility with the Chinese.313

Security/Pan K Link Turn (1/3)

**Link Turn – Cooperation with China defies traditional realist theories and can solve for the miscalculations and arm race over space**

**Rathberger et al., European Space Policy Institute Resident Fellow, 7**

(Wolfgang AND Joachim GLAUBITZ (formerly with Stiftung Wissenschaft und Politik, Berlin) AND Keith HAYWARD (Royal Aeronautical Society, London) AND Isabelle SOURBÈS-VERGER (Centre National de la Recherche Scientifique, Paris), China’s Posture in Space, Report 3, June 2007, pp 42-43) AC

Even if China has its own plan to build an independent capability, it’ll be eager to cooperate with the US But the reluctance of US militaries and containment promoters is still overweighting the need for cooperation. As James Lewis showed, China’s plans fit well with Michael Griffin’s description of how he envisions the cooperation between the two countries: each nation will build is own highway to the moon and then they will cooperate when they’ll get there15. But this view clearly demonstrates that the US is ready to cooperate only if they don’t substantially improve China’s capabilities in doing so. This is precisely the inescapable paradox of the US position toward China. On one hand, cooperation will increase American influence over China’s space program and capabilities. This could foster economic ties and mutual comprehension. But on the other hand, this will fill the technological gap between the two countries which means that the relative power of the US will decrease in the benefit of China. Thus, the possibility of cooperation between China and the US still depends on how both countries conceive their national interests. The close economic interdependence between both countries has not yet been followed by any great increase in trust and dialogue. And at the same time, the intertwining of civil and military programs as well as the lack of a clear-cut definition of China’s space ambitions will worry the promoters of engagement and motivate those of containment. The Chinese anti-satellite test of 11 January 2007 has clearly shown the divide between those two strategies toward China. The hit of a seven-year old Chinese satellite (Feng-Yun 1C) in polar orbit at an altitude of 848 kilometres by a missile launched from the Xichang Space Centre stirred up the media, the congressmen and the political analysts, but not always for the same reasons. While hardliners such as California Republican Senator Duncan Hunter called upon the United States to increase its anti-missile capabilities immediately, analysts like Philip E. Coyle and Theresa Hitchens outlined the need for cooperation after the event16. Through the lenses of power politics and balance of power theory, the test has largely been interpreted as a sign of China’s aggressiveness. Even if the United States and Soviet Union have conducted anti-satellite tests from the early 60’s, the January test seemed to have clearly demonstrated the increase of China’s capabilities and its challenging behaviour. Thus, facing the new Chinese capabilities, the US has no choice but to increase its capabilities in order to ensure its security. Corresponding to the idea of international politics as Realpolitik, this view has been held by the promoters of US leadership in space. Since the Rumsfeld Commission Report of 2001, the US government devoted significant resources to establish military space control and the Chinese test seems to challenge this goal. But in the meantime, it raises questions about the legitimacy of the current US strategy. For example, if Theresa Hitchens considers the test as “provocative” and “irresponsible”, this was not because it could trigger a militarization of space but because it created persistent space debris in a highly used orbit. Challenging the realist common-sense assumptions and denouncing the aggressive unilateral path in space being trod by the Bush administration during the past 5 years, Hitchens – consistent with her liberal views – believes that China’s efforts to become a peer competitor in space could have positive implications (like cooperation on civil space programs). So does Phillip Coyle when he states that an arms race in space does not necessarily need to follow from the Chinese test. Far from being an aggressive act, this test could be interpreted as a signal to open the difficult discussion leading to a treaty freeing space from militarization. Thus, as Theresa Hitchens stated, this test signifies that the US has a “rapidly disappearing window” within which it can construct a cooperative atmosphere with China and all the space-faring powers. Therefore, even if China should be criticized for the material consequences of its act, it should not be condemned for its political implications.

Security/Pan K Link Turn (2/3)

**US cooperation in multilateral arms control prevents the securitization of space**

**Coyle, senior advisor to the president of the World Security Institute, 7**

(Phillip E – Center for Defense Information Senior advisor and defense analyst, The Chinese Satellite Destruction: What’s next, <http://www.cdi.org/friendlyversion/printversion.cfm?documentID=3835&from_page=../program/document.cfm>, Access: 6/30/11) AC

However, an arms race in space does not need to follow from this Chinese test. China, one of three countries to have successfully launched astronauts into orbit, has consistently called for arms control in space. Since its ASAT test, China has restated officially that it wants the United States, Russia and other nations to develop a new global treaty to govern the use of outer space. “Space is the common property for humanity,” a Chinese Foreign Ministry spokeswoman, Jiang Yu, said at a recent press briefing in Beijing. “China is opposed to an arms race in space and we want to work toward having a treaty to govern the peaceful use of space.” In late January, Russian President Vladimir Putin and Indian Prime Minister Manmohan Singh called for a “weapons free outer space.” A Putin spokesman explained, “The fundamental position of the Russian Federation is that outer space should be absolutely weapons free.” On the other hand, U.S. officials seem to talk only of conflict and in the updated National Space Policy, released in October 2006, U.S. President George W. Bush asserted the right to use force against countries that disrupt American satellites. The United States, Britain and the Soviet Union completed the 1967 UN Treaty on the Peaceful Uses of Outer Space -- the Outer Space Treaty, one which has been signed and ratified by 98 countries, including China. That treaty prohibits any nation from putting nuclear or other weapons of mass destruction into space or stationing them on any celestial body. Two years ago, the Canadian government announced that Canada would not participate in the kind of space warfare program that Kyl and Hunter now advocate. While expressing its continuing commitment to NORAD, the Canadian government said it would not join the Pentagon's missile defense program, the precursor to war in space. Why? Why did one of our closest partners, and neighbors, take this strong step? In part it was because Canadian citizens are justifiably skeptical of U.S. missile defense plans. Canadian citizens question that the United States can develop missile defenses that will be effective against enemy missiles under realistic operational conditions. And Canadians also question the costs, both the money and the consequences. But that was only part of their concern. Canada also did not want to be part of creating a new arms race in space. They understand that U.S. missile defense is the first wave in which the United States could introduce attack weapons into space, that is, weapons with strike capability, and Canada did not want to contribute to that. The Pentagon wants a layered missile defense system, with interceptors launched from land, sea, air, and space -- one that would be capable of shooting down enemy missiles in all phases of their flight. The idea is that if one layer misses, the next layer won't, and so forth. Pentagon briefings picture giant glass domes covering the United States, and we are to imagine that enemy missiles will bounce off these glass domes like hail off a windshield. And one of those glass domes is to be in space. But this debate is not just about missile defenses in space, it is also about deploying new strike weapons in space to attack the space assets of other countries. The terms the Pentagon and the Air Force use for this are space control and counter space -- that is, like “Star Wars,” the movie. Some observers may wish that space was pure and pristine with no military systems poised there for war -- like Antarctica. But the militarization of space is already a fact of life. Our military relies on space satellites for military communications, for reconnaissance and sensing, for weather, and for targeting. However, the weaponization of space hasn’t happened. There are no strike weapons deployed in space. So deciding not to deploy strike weapons in space -- or a “space-based test bed” -- is a practical place to draw the line, exactly what Canada did. In the United Nations, Canada, Russia and China have been urging this for years. But the United States has blocked these efforts. Reportedly, the U.S. Defense Department has even considered whether or not the United States should continue to participate in the Outer Space Treaty. Reporters could ask, “Why has the United States been blocking arms control in space? Doesn’t the United States with its heavy dependence on space satellites, have the most to lose? And why would President Bush, or those running for the presidency in 2008, consider abandoning an existing space treaty?” The United States has much more to lose from war in space than any other country. We <CONTINUED>

Security/Pan K Link Turn (3/3)

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depend on space for both military and civil, commercial applications. For commerce, for communications, for weather, for banking, for global positioning and mapping, for scores of uses, commercial satellites in space now affect our daily lives. The 2008 Summer Olympics to be held in Beijing, and broadcast on television by satellite, will give Americans a new appreciation for the vast sweep of China. We can decide to continue sword rattling, poking that immense bear of a nation with a stick, or we can get down to cases with them, and work for arms control in space. Not since the development of the atomic bomb has the United States had an equivalent opportunity and incentive to show leadership for restraint in the development of a new class of weapons, namely weapons in space.

Status Quo Uses Security Logic (1/2)

**Chinese ASAT tests mobilize the security regime of the United States in order to control space**

**Coyle, World Security Institute senior advisor to the president, 7**

(Phillip E – Center for Defense Information Senior advisor and defense analyst, The Chinese Satellite Destruction: What’s next, <http://www.cdi.org/friendlyversion/printversion.cfm?documentID=3835&from_page=../program/document.cfm>, Access: 6/30/11) AC

In a recent analysis for Harvard’s Neiman Watchdog, CDI Senior Advisor Philip Coyle challenges reporters to ask the important questions facing the international community in light of China’s recent ASAT test. Why has the United States been blocking arms control in space? Doesn’t the United States, with its heavy dependence on space satellites, have the most to lose? The Chinese anti-satellite test on Jan. 11, 2007, has stirred up the American media and the U.S. Congress. In this test, China launched an anti-satellite missile and hit a seven-year old Chinese weather satellite, the Feng Yun 1C, in polar orbit, at an altitude of 530 miles. According to Aviation Week, which first reported the test, the attack occurred as the weather satellite passed over the Xichang Space Center, a major Chinese space launch center. Hundreds of news articles have decried the Chinese test and California Rep. Duncan Hunter, who is running for president, has called for the United States to build a system to pulverize enemy missiles launched toward U.S. space assets -- not only military satellites, but U.S. commercial satellites as well. Arizona Sen. John Kyl urges the U.S. Missile Defense Agency to begin building a space-based test bed which would include both kinetic and directed-energy components, saying, “The best way to protect our satellites...is to ensure that the [enemy] missiles never leave the atmosphere.” Not mentioned as often is that the United States and Russia have conducted dozens of anti-satellite tests, going back to the early 1960s. In 1985, the United States Air Force destroyed a U.S. Solwind satellite with a two-stage air-to-space missile fired from an F-15A Eagle jet fighter as it zoomed to 80,000 feet, a test which demonstrated that anti-satellite weapons could be launched from aircraft. As recently as 1997, the Pentagon conducted an ASAT test using a ground-based laser which showed that even a relatively low power laser can temporarily blind a satellite. Considering this long history, why has there been such an outcry over this recent Chinese test? Space Junk For one thing, space is more crowded than it was 10 or 20 years ago. Not only are there over 800 actively functioning satellites on orbit of which the U.S. accounts for slightly over half, but today there are about 18,000 pieces of space garbage bigger than an orange whizzing around out in space, about 10,000 of those in Low Earth Orbit (or up to roughly 1,200 miles in altitude). The recent Chinese test smashed their weather satellite into a multitude of new space junk. Many operational satellites will now pass through this new debris field, including some of China’s own satellites. The new debris could damage operational satellites, puncture solar arrays, and even threaten the International Space Station. Worse still, as the amount of space junk grows, some scientists predict a cascading effect where new debris could collide with older space junk. This chances setting off a kind of chain reaction that threatens to wreck nearby satellites. But China knew all this and conducted its test anyway. According to an unnamed U.S. official as reported by CNN, the Chinese had tried on three prior occasions and failed each time before finally achieving their successful intercept on Jan. 11. Why did China conduct this test and does it mean a new arms race in space? U.S. Space Domination Policies In effect, responding to years of sword rattling by the United States, with this test China said to the United States, “Wait a minute. Not so fast.” For the past six years, the Pentagon and the U.S. military have been touting a muscular policy of space dominance and space superiority to control space. The U.S. Space Command Joint Vision 2020 of 2000 puts it succinctly, “Robust capabilities to ensure space superiority must be developed just as they have been for land, sea, and air.” To illustrate this policy, the Joint Vision 2020 document uses an artist’s rendition of a massive space-based, high-power laser zapping Iran. The Pentagon visualizes space as a platform for prompt global strike capabilities that could threaten the entire world. As explained in the Air Force Space Command Strategic Master Plan for FY 06 and beyond, “A viable, prompt global strike capability, whether nuclear or non-nuclear, will allow the U.S. to rapidly and accurately strike distant high-payoff, difficult-to-defeat targets. This capability provides the U.S. with the flexibility to employ innovative strategies to counter adversary anti-access and area denial strategies. Such a capability will provide warfighting commanders the ability to rapidly deny, delay, deceive, disrupt, destroy, exploit, <CONTINUED>

Status Quo Uses Security Logic (2/2)

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and neutralize targets in hours/minutes, even when U.S. and allied forces have a limited forward presence.” The Threat The path to devoting significant U.S. military resources to space control was established in early 2001 by the first Rumsfeld Commission Report with its apocalyptic warnings of a “Space Pearl Harbor.” Kahlil Gibran said that the fear of need is greater than the need itself, and today, Pentagon planners take this type of hand-wringing threat for granted, as though it already exists, and that war in space is just as “inevitable” as war on land, sea, and in the skies. The Pentagon isn’t content without a good threat, and the Chinese ASAT test played right into their hands, especially the U.S. Air Force which can now use this test to claim that the U.S. faces an urgent threat in space, a threat that current defense budgets do not adequately address. As noted in the Wall Street Journal, it was China’s gift to the Pentagon. Ironically, the Pentagon’s fiscal year 2008 defense budget, just released but determined before the Chinese test, actually reins in Air Force spending in space, an area of the DOD budget which has been plagued with cost overruns and delays. We don't own space We don't own space. It's not ours. But when the U.S. military talks about space dominance, space superiority, and space control, as they do regularly, they are behaving as if they think the Pentagon does own space, and doesn’t need to consult with anyone else about how space should be used. Fed up with U.S. braggadocio, China felt they needed to flex their muscles too.

Coop Alt Actor CP Answer – China Key

China is the best coop partner option – program is advance and has long-term vision

Adams, Christian Science Monitor, 10

[Jonathan, 10-28-10, Christian Science Monitor, “China is on path to 'militarization of space'”, <http://www.csmonitor.com/layout/set/print/content/view/print/332521>, accessed 7-2-11]

China looks set to pull ahead in the Asian space race to the moon, putting a spacecraft into lunar orbit Oct. 6 in a preparatory mission for an unmanned moon landing in two or three years.

Chinese engineers will maneuver the craft into an extremely low orbit, 9.5 miles above the moon's surface, so it can take high-resolution photos of a possible landing site.

Basically, China is looking for a good "parking space" for a moon lander, in a less-known area of the moon known as the Bay of Rainbows.

The mission, called Chang'e 2 after a heroine from Chinese folklore who goes to the moon with a rabbit, highlights China's rapidly growing technological prowess, as well as its keen desire for prestige on the world stage. If successful, it will put China a nose ahead of its Asian rivals with similar lunar ambitions – India and Japan – and signal a challenge to the American post-cold-war domination in space.

The Asian space race

Compared with the American and Soviet mad dashes into space in the late 1950s and '60s, Asia is taking its time – running a marathon, not a sprint. "All of these countries witnessed the cold war, and what led to the destruction of the USSR," says Ajey Lele, an expert on Asian space programs at the Institute for Defense Studies and Analysis in New Delhi, referring to the military and space spending that helped hasten the decline of the Soviet regime. "They understand the value of money and investment, and they are going as per the pace which they can go." But he acknowledged China's edge over India. "They started earlier, and they're ahead of us at this time," he says.

India put the Chandrayaan 1 spacecraft into lunar orbit in 2008, a mission with a NASA payload that helped confirm the presence of water on the moon. It plans a moon landing in a few years' time, and a manned mission as early as 2020 – roughly the same timetable as China.

Japan is also mulling a moonshot, and has branched out into other space exploration, such as the recent Hayabusa mission to an asteroid. Its last lunar orbiter shared the moon with China's first in 2007.

Both Japan's and India's recent missions have been plagued by glitches and technical problems, however, while China's have gone relatively smoothly.

Mr. Lele said the most significant aspect of the Chang'e 2 mission was the attempt at a 9.5-mile-high orbit, a difficult feat. India's own lunar orbiter descended to about 60 miles in 2008, he said, but was forced to return to a more stable, 125-mile-high orbit.

A low orbit will allow for better scouting of future landing sites, said Lele. "They [the Chinese] will require huge amounts of data on landing grounds," said Lele. "A moon landing hasn't been attempted since the cold war."

During the famed 1969 Apollo 11 manned mission to the moon, astronaut Neil Armstrong had to take control of the lander in the last moments of descent to avoid large moon boulders strewn around the landing site. China hopes to avoid any such last-minute surprises with better reconnaissance photos, which would allow them to see moon features such as rocks as small as one-meter across, according to Chinese media.

Is China's space exploration a military strategy?

Meanwhile, some have pointed out that China's moonshot, like all space programs, has valuable potential military offshoots. China's space program is controlled by the People's Liberation Army (PLA), which is steadily gaining experience in remote communication and measurement, missile technology, and antisatellite warfare through missions like Chang'e 2.

The security implications of China's space program are not lost on India, Japan, or the United States.

The Pentagon notes that China, through its space program, is exploring ways to exploit the US military's dependence on space in a conflict scenario – for example, knocking out US satellites in the opening hours of a crisis over Taiwan.

"China is developing the ability to attack an adversary's space assets, accelerating the militarization of space," the Pentagon said in its latest annual report to Congress on China's military power. "PLA writings emphasize the necessity of 'destroying, damaging, and interfering with the enemy's reconnaissance ... and communications satellites.' "

More broadly, some in the US see China's moon program as evidence that it has a long-range strategic view that's lacking in Washington. The US has a reconnaissance satellite in lunar orbit now, but President Obama appears to have put off the notion of a manned return to the moon.

Treaty CP Answers

China will say no to treaties, it threatens their commercial market

Houpt, Master of Arts, Security Studies, Georgetown University, 2011

(Daniel M., “Does China have a comprehensive, coordinated, and consistent space policy? Implications for U.S. policymakers,” ProQuest, accessed 7/1/11, p. 43-44) EK

There are also more nuanced ways in which China’s space policy is internally inconsistent. First, signing an arms control agreement would allow the U.S. to relax in its pursuit of space dominance and focus more fully on its own commercial and civilian space programs, reviving a major competitor for China. This would complicate China’s ability to gain a leadership position in outer space as well as its ability to expand its share of the Western space commercial market. Second, prestige may hurt commercialization. Prestige requires maintaining a lead or being at the forefront of space technological innovation. To maintain this lead, China would ideally not market the very technology that keeps its preeminence, which in an increasingly competitive industry may be necessary for success. Therefore, China would be faced with either barring foreign space programs from gaining its technology or losing this edge in favor of commercial gain. Indeed, the U.S. has been in a similar position and its strict export controls have impeded increased space industry success.

Multilateral treaties don’t solve – goes against U.S. policy

Ressler, U.S. Air Force Major, 9

(Aaron R., Advancing Sino-U.S. Space Cooperation, April 2009, p. 4, http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA539619, accessed 6/29/11) EK

After reviewing Chinese counterspace capabilities and possible motivations, the question at hand, again, is how can the U.S. make ASAT operations less attractive for China? To not do anything is an option since China broke no laws or treaties.24 But what if China were to pursue continued and even more aggressive ASAT testing? Then there is always the option of multilateral treaties that could be designed to prevent or limit the weaponization of space. While this may appear to be an attractive option, a treaty of this sort could go against the 2006 U.S. National Space Policy which states that the U.S. intends to maintain its freedom to act in space.25 U.S.-China space cooperation could be the ideal answer to deter Chinese counterspace testing and operations without significantly tying the hands of the U.S. with regard to maintaining freedom of action in space.

Arms Control/Treaty CP Answer –No Verification And Constrains The US (1/2)

**Diplomatic Bilateral and Multilateral efforts will fail, they can’t be verified and they unreasonably constrain the US**

**Kueter, George C Marshall Institute president, 7**

(Jeff – President of the George C Marshall Institute: a DC Think Tank, China's Space Ambitions -- And Ours, New Atlantis, Pg. 7-22 No. 16, Lexis) AC

The debate over what to do about security challenges in space is both old and new. Begun during the Cold War when both the United States and Soviet Union considered deploying ASAT capabilities and missile-defense systems, the argument receded for much of the 1990s. It has returned in the months since President George W. Bush reopened the possibility of space-based missile defenses and issued a new national space policy, and since the Air Force began discussing broader uses of space for military purposes. The Chinese ASAT test has further galvanized the debate. Any serious discussion of policy options must begin by moving beyond a tired lexical dispute. Discussions about space security are cluttered with commentators and advocates fretting about the potential implications of "militarizing" and "weaponizing" space. But it is too late: space is already militarized and weaponized. The militarization of space--the use of space for military purposes--began with the launches of the first American and Soviet military satellites nearly five decades ago. The weaponization of space, too, has already happened. While there are currently no orbiting anti-satellite or missile-defense systems (in part because arms control activists for years prevented the development of either), there are satellites in space that are an integral part of weapons systems here on Earth. For that matter, all the long-range ballistic missiles in the world, as well as ASATs like the one China demonstrated this year, are really "space weapons" because even though they may not be launched from space, they can be fired into space and they transit through space to their targets. In a looser sense, even tools for jamming satellite transmissions or bombs used in wholly terrestrial attacks against ground stations could be counted as "space weapons" since they would serve to disrupt space assets--that is, they unquestionably bring war to space. Setting aside such semantic quibbling, the real challenge now facing the United States is how best to deter, deny, and dissuade the Chinese, and other emerging space powers, from hostile actions in space. One approach would involve diplomacy and international discussions. For some time, arms-control advocates have been pushing for agreements to ban weapons in space. More recently, in light of the changed circumstances brought on by China's tests, the focus has shifted to securing "codes of conduct" and devising "rules of the road" to regulate how nation-states behave in space. Sympathetically interpreting China's recent tests as an understandable reaction to U.S. policies, arms-control advocates have characterized American actions in space as dangerous and provocative, and have condemned the United States for refusing to enter into international negotiations. Only a treaty, they argue, can restrain the Americans' aggressive tendencies. As one arms-control advocate told the Washington Post, the Chinese were responding to U.S. space policies and sending a signal to the Pentagon: "We can play this game, too, and we can play it dirtier than you." Representative Edward Markey, a Democrat from Massachusetts, told the Post that the United States must initiate "an international agreement to ban the development, testing, and deployment of space weapons and anti-satellite systems." This attitude--blaming America for other countries' actions and demanding that the United States preemptively disarm itself--is reminiscent of the old Cold War debates over nuclear weapons. Also strikingly familiar to students of the Cold War is Beijing's hypocritical hand-wringing over the specter of an arms race in, and the weaponization of, outer space. As Michael Pillsbury has pointed out, "While China has publicly assumed a leadership position in international activities to ban space weapons, there is an active group within China not only advocating the weaponization of space but also putting forth specific proposals for implementation of a Chinese space-based weapons program." Even while the PLA was successfully executing at least two anti-satellite tests, the Chinese diplomatic corps was raging against the supposed weaponization of space by the United States. At a U.N. conference on space in 2006, a Chinese Foreign Ministry official, Tang Guoqiang, complained about actions in space that could "cause serious consequences": "The policy of a certain country [i.e., the United States] to test, deploy and use weapons and weapon systems in outer space [is] disconcerting. Outer space is the common heritage of mankind and [the] weaponization of <CONTINUED>

Arms Control/Treaty CP Answer –No Verification And Constrains The US (1/2)

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outer space is bound to trigger off [an] arms race in outer space, thus rendering outer space a new arena for military confrontation." Even after the January 2007 ASAT test, a Chinese Foreign Ministry official insisted that countries "opposed to the weaponization of space" should "join hands to realize this goal." Existing treaties allow actions to protect and defend national interests in space. Article IV of the Outer Space Treaty forbids signatories (including the United States and China) from placing nuclear or other weapons of mass destruction in orbit or on the Moon, and prohibits the testing of weapons, conduct of maneuvers, or construction of fortifications on the Moon and other celestial bodies. Since October 1967, when the treaty went into force, nearly every U.S. president has interpreted its requirements in such a way as to explicitly allow the development, operation, and maintenance of the space-control capabilities needed to ensure freedom of action in space and to deny such freedom of action to adversaries. During successive administrations of both political parties, the National Security Council has interpreted the treaty as not barring the deployment of space-based missile defenses or other systems to perform space-control missions. Work to draft new treaties continues apace. China and Russia have been spearheading international efforts to construct a framework to govern space. The Prevention of an Arms Race in Outer Space (PAROS) process at the U.N. Conference on Disarmament calls for formal negotiations to prohibit the placement of weapons in orbit or on celestial bodies. But whatever shreds of credibility this international process had were destroyed by the recent Chinese tests. Another diplomatic tack contemplated by those opposed to "weaponizing space" is the adoption of multilateral codes of conduct. To a certain extent, such norms will develop organically on their own, as the growing interdependence between economic and security interests forces government and commercial satellite operators to cooperate, and as Washington increasingly coordinates its space activities with military and civil space authorities in allied and friendly nations. Over time, new norms for shared space situational awareness, debris mitigation, and orbital traffic management may emerge among responsible space-faring nations. But such norms make no sense if the parties have not first built up trust. And if such norms are externally imposed, they will be nothing more than unverifiable arms control agreements in camouflage. Absent the ability to ascertain or enforce compliance, a code-of-conduct rule regime will be weak and, more likely than not, ineffectual. A rules system for space between potential adversaries that relies on voluntary compliance and lacks viable punitive measures will be a hollow one. (Nor, for that matter, would an international treaty "banning" anti-satellite testing be enforceable or verifiable; the ignominious record of enforcing and verifying treaties prohibiting activities on Earth should be proof enough of that.) The chief failing of the diplomatic approach to dealing with the new reality of space weapons is that it is blind to the reason a potential adversary like China would seek access to space in the first place--namely, the desire to be able to inflict a crippling blow against U.S. military and economic might by decapitating its surveillance and communications abilities. Those pushing for a new treaty or a code of conduct have yet to explain why China would abandon capabilities that threaten the "soft underbelly" of American military power. The Chinese regime clearly aspires to develop such capabilities; there is little reason to believe it would negotiate them away. The United States should resist calls for such futile diplomatic efforts.

China Soft Power Bad Answer – Coop Solves

China’s soft power is so strong it will eventually draw in US allies and isolate the US, cementing China’s rise to power – only US cooperation can solve

**Imran Masters candidate at Universidade Nova de Lisboa, 10**

(Mara, “China's space program : a new tool for PRC "soft power" in international relations?” accessed:7-01-11, <http://run.unl.pt/handle/10362/5473> pg13)TJL

China’s space program goes far beyond just military counterspace applications, manned space aspirations, and lunar exploration endeavors. Its pursuit of both commercial and scientific international space ventures constitutes a small, yet growing, percentage of the global space launch and related space satellite service industry and also highlights China’s willingness to cooperate with nations far away from Asia for political and strategic purposes. Thus, the importance lies in understanding how China, through greater cooperation in space-related ventures, is establishing long-term partnerships that may constitute a threat either to counter or even isolate the United States and enhance China’s “soft power,” amongst both key American allies as well as some developing nations in U.S. backyard. An appropriate U.S. response, however, may not lie in the military arena, but instead in a revival of both past U.S. space outreach efforts as well as more business-friendly export control policies.

Spending Answer – Burden-Sharing

Burdensharing solves the link – coop saves money

Zhou, Chinese Academy of the Sciences Center for Space Science and Applied Research and George Washington University professor, 8

[Yi, Space Policy 24, “Perspectives on Sino-US cooperation in civil space programs”, 132-139, Science Direct)

Savings on the cost of US space projects to free up funds for more missions. Space science and space exploration activities are all extremely expensive, whether human or robotic. It is sometimes a waste of money and resources for different countries to explore the same unknown with the same scientific goals. Humans around the world should definitely share in pursuing these missions. In contrast, duplicated efforts will result in negative byproducts, such as more space debris and an increased perception of a space race. China’s space launch and satellite ability has advanced greatly. Its space budget is also very stable, although total funding is not very high. It is believed that China’s civil space budget will grow continually over the next 15 years. If the USA can supply some instruments to or engage in joint research with China, it will be able to save significantly on mission costs associated with instrument development and launch. The USA would thus have more money for other worthwhile projects which other countries do not have the ability to do at present. This would obviously help the USA maintain its ‘‘space leadership’’.

Cooperation with China would reduce costs

Logan, Specialist in Resources, Science, and Industry Division, 8

(Jeffrey, CRS Report for Congress, “China’s Space Program: Options for U.S.-China Cooperation”, 11/29/8, p.6, accessed 7/1/11, CW)

The potential benefits of expanded cooperation and dialogue with China include: ! Improved transparency. Regular meetings could help the two nations understand each others’ intentions more clearly. Currently, there is mutual uncertainty and mistrust over space goals, resulting in the need for worst-case planning. ! Offsetting the need for China’s unilateral development. Collaborating with China — instead of isolating it — may keep the country dependent on U.S. technology rather than forcing it to develop technologies alone. This can give the United States leverage in other areas of the relationship. ! Cost savings. China now has the economic standing to support joint space cooperation. Cost-sharing of joint projects could help NASA achieve its challenging work load in the near future. Some have argued that U.S. space commerce has suffered from the attempt to isolate China while doing little to keep sensitive technology out of China.

Cooperating with China offsets NASA’s budget and strengthens the economy

Logan, Specialist in energy policy, Congressional Research Service 9-29-08

(Jeffrey has a M.S. in environmental science and Master in Public Administration,1995, Indiana University, School of Public and Environmental Affairs B.S. in aerospace engineering and B.A. in general arts and sciences, 1985, Pennsylvania State University <http://www.fas.org/sgp/crs/row/RS22777.pdf> “China’s Space Program: Options for U.S.-China Cooperation,” pg. 6, accessed: 6-28-11) TJL

Cost savings. China now has the economic standing to support joint space cooperation. Cost-sharing of joint projects could help NASA achieve its challenging work load in the near future. Some have argued that U.S. space commerce has suffered from the attempt to isolate China while doing little to keep sensitive technology out of China.

Politics Aff – Plan Would Be a Win

Plan would be a win – he is following through on cooperation pledge, and burden-sharing

Svitak, Space News, 5-4-11

[Amy, Space News, “China Viewed as Potential U.S. Partner in Future Mars Exploration”, <http://www.spacenews.com/policy/110504-china-partner-mars-exploration.html>, accessed 7-10-11]

U.S. President Barack Obama views China as a potential partner for an eventual human mission to Mars that would be difficult for any single nation to undertake, a senior White House official told lawmakers.

Testifying May 4 before the House Appropriations commerce, justice, science subcommittee, White House science adviser John Holdren said near-term engagement with China in civil space will help lay the groundwork for any such future endeavor. He prefaced his remarks with the assertion that human exploration of Mars is a long-term proposition and that any discussion of cooperating with Beijing on such an effort is speculative.

“[What] the president has deemed worth discussing with the Chinese and others is that when the time comes for humans to visit Mars, it’s going to be an extremely expensive proposition and the question is whether it will really make sense — at the time that we’re ready to do that — to do it as one nation rather than to do it in concert,” Holdren said in response to a question from Rep. Frank Wolf (R-Va.), a staunch China critic who chairs the powerful subcommittee that oversees NASA spending.

Holdren, who said NASA could also benefit from cooperating with China on detection and tracking of orbital debris, stressed that any U.S. collaboration with Beijing in manned spaceflight would depend on future Sino-U.S. relations.

“But many of us, including the president, including myself, including [NASA Administrator Charles] Bolden, believe that it’s not too soon to have preliminary conversations about what involving China in that sort of cooperation might entail,” Holdren said. “If China is going to be, by 2030, the biggest economy in the world … it could certainly be to our benefit to share the costs of such an expensive venture with them and with others.”

Politics Aff – Wolf Link Trick (1/2)

Wolf is the subcommittee chair – any funding increases have to go through him

Schneider, Congressional Research Service Specialist on Congress and Koempel, Congressional Research Service Senior Specialist in American National Government, 10

(Judy and Michael L, Congressional Research Service, 10/5/2010, House Committee Chairs: Considerations, Decisions, and Actions as One Congress Ends and a New Congress Begins, <http://assets.opencrs.com/rpts/RL34679_20101005.pdf>, Access: 7/11/11) AC

A committee chair serves as the leader of a committee, with responsibility for setting the course and direction of the panel for committee members and the House and for managing a large professional and paraprofessional staff. The senior committee staff should ensure the chair’s goals are carried out effectively. Once a committee chair is selected during the post-election transition period, he or she, often in consultation with others, makes a series of decisions and takes a series of actions. Some actions complete a committee’s duties in the Congress just ending, while other actions are taken in anticipation of the new Congress and then in the new Congress. Some decisions are related to the committee’s policy calendar; others to the committee’s administrative functions; others to the chair’s responsibilities during committee sessions; others to the role of committee members; others to the relationship with the committee’s ranking minority member, other chairs, and party leaders; and still others related to subcommittee leaders. Many decisions are made with a deadline imposed by House rules. Specifically, a committee chair controls the selection of committee staff, authorizes expenditures from the committee budget, establishes operational and ethics policies, determines committee travel allocations, decides the content of the committee website, and is responsible for administration of the committee’s rooms, paperwork, and other operations. Most committees entrust the drafting of the budget to the committee chair, although a committee’s minority party members seek to ensure that they receive an appropriate allocation of resources. Before the chair introduces a funding resolution, the committee approves the chair’s draft budget.

Normal means makes Wolf an optimal advocate for the plan

Kennedy, advocate with the Space Frontier Foundation, 11/14/10

(Jack, “Guest column: ‘Envoys of mankind’ deserve benefits of Astronaut Rescue Treaty”, InsideNova.com, <http://www2.insidenova.com/news/2010/nov/14/envoys-mankind-deserve-benefits-ar-651129/#fbcomments>, accessed 6/30/11) EK

Several members of Congress appear not to be willing to obligate, or to receive, assistance from Chinese-made space vehicles or their human crews despite the international law. Rep. Frank Wolf questions cooperation with the Chinese in space, citing human rights violations or military technology transfer concerns. The congressman has legitimate concerns with the Chinese. The question is whether this is the correct venue to seek to enforce it; space may not be the proper venue when it comes to astronaut rescue. Sino-American relations are not perfect, but most analysts have characterized U.S.-China foreign policy as complex and multi-faceted. The People’s Republic of China and the United States are neither allies nor enemies. The American military establishment doesn’t view China as an enemy, but as a competitor in some areas and a partner in others. The United States must decide if China is a competitor or partner in space affairs. In either case, international law obligates both nations to cooperate when the lives of “envoys of mankind” are at stake. In this decade, American commercial space launch firms plan to place more humans in space than cumulatively all nations have over the past 50 years. It would be an error not to have a bona fide protocol to provide one another assistance in space if the situation demands. Like Nixon, it may be that Congressman Wolf is the more appropriate person to open this door to the future in Chinese-American space relations and to suggest some space détente rescue pact among American, Chinese, Indian and Russian space agencies. Cooperation does not have to be difficult; human spacefaring nations

**[CARD CONTINUES]**

Politics Aff – Wolf Link Trick (2/2)

**[CARD CONTINUED, NO TEXT REMOVED]**

need cooperation on ship-to-ship communication protocols, docking ports, oxygen and water hose sizes, and the like to save the lives of those opting to spaceflight in the decades ahead. The United States need not transfer the designs of our booster rockets, the next spacecraft design or compromise national security technology transfer concerns to accomplish a mutual rescue-in-space plan. The United States need not wait for the siren call of a Titanic-like space mishap to determine if we have measured up to the spirit of international space law. We need not determine the ethnicity of envoys of humanity to determine if they are worthy of a space rescue. No matter who’s involved —Chinese, Indian, Russian, American NASA astronauts or private American space tourists — Americans need to lead in the development of protocol and etiquette in providing assistance in space emergencies. There will be another mishap in space by Americans. Equally, there will be life-threatening problems in space for the Chinese, Russians and Indians. We need not adopt domestic policy that demeans the international law to save the lives of fellow envoys of humankind; quite the contrary, America needs men like Congressman Wolf leading the way, ensuring domestic codification of the international astronaut rescue agreement for 21st century spaceflight. Wolf is in a good position to start up one of the more important diplomatic protocols for in-space multinational space rescue plans as a member of the House Appropriations Committee. Rather than simply bashing the NASA administrator for his recent visit to China to review their space launch hardware and assets, the congressman could seek to fund a NASA and FAA study for American participation in the development of a multinational space rescue plan in the next fiscal year’s federal budget.

Politics Aff – China Bashing Now (1/2)

2012 Campaign is already prompting China bashing – economic fears, Human Rights, and political Posturing

Burns, Former Editor for the Harvard Political Review, 5/24/11

(Alexander – Staff Writer Politico, Politico, 5/24/11, “GOP sees red over China”, Lexis, Accessed July 8, 2011) AC

The 2012 foreign policy debate is just getting under way, but already the Republican presidential field has picked a favorite overseas punching bag: China.

After several presidential elections dominated by security issues in the Middle East, fear of a red menace in the Far East is making a comeback. And no country in that region casts a larger or more frightening political shadow than China - a nation that seems to embody every economic and foreign policy anxiety of the GOP primary electorate.

The likely candidacy of Jon Huntsman, the Mandarin-speaking former ambassador to Beijing, ensures China will be on the Republican agenda in 2012. But that's only going to accelerate a trend that's already under way.

Tim Pawlenty, who announced his bid for president Monday, tells audiences that "America's rightful place is not lagging behind China," alluding to widespread concern among conservatives that the United States is on the down swing.

Another Minnesotan poised to run for president, Rep. Michele Bachmann, won applause at the Conservative Political Action Conference this year by railing against the national debt and proclaiming "Hu's your daddy!" - a reference to Chinese President Hu Jintao that Bachmann has used since.

Even Donald Trump, before he pulled his name out of the 2012 hat, found traction on the issue, telling workers in New Hampshire that China "is raping this country." The day after Mike Huckabee withdrew from consideration, he voiced a similar concern, noting that Americans are "getting shanghaied by China."

It's not just the activist right that's fired up about China. Former Massachusetts Gov. Mitt Romney has called China "a great threat to the stability of the world" - strong words from a former private-equity executive schooled in the ways of global economic competition.

Republicans say the early attention to China, driven in many cases by talk radio and conservative cable news, reflects the sheer number of core conservative issues that intersect there.

China's an economic juggernaut and the largest holder of U.S. debt. Based on that alone, the country would figure big in the imagination of Republicans concerned about the notion of American national decline. But China's also a national security rival and a human rights violator with little regard for religious freedom, making it especially relevant to the foreign policy and social conservative wings of the GOP.

"If you don't care about jobs, you don't care about defense and you don't care about the persecution of the Catholic Church, then you can ignore it," said Virginia Rep. Frank Wolf, a vocal Republican China hawk. "If the Republican Party doesn't talk about this issue, I think it's a failing of leadership."

On one level, China's presence on the campaign trail is nothing new: Many Democrats ran ads last year accusing the GOP of wanting to ship jobs overseas, including to China. In the special House election unfolding in upstate New York, tea party candidate Jack Davis has run a protectionism-heavy campaign with ads showing a laid-off father telling his family, "Company's moving to China."

But in the presidential race, it's not just job loss or trade issues that are making China part of the conversation. Former Tennessee Sen. Jim Sasser, a Democrat who served as President Bill Clinton's ambassador to Beijing, said that China serves as a stand-in for a much broader sense of unease.

"As far as the man in the street or the woman in the street is concerned, it's now a question of economic rivalry," Sasser said. "There is also a sense of curiosity about China and even a kind of grudging admiration for what they have accomplished in their economy."

"The shadow of Tiananmen still lingers in some people's minds and, I think, has an adverse, negative impact," Sasser continued, referring to the 1989 massacre of pro-democracy demonstrators in the Chinese capital

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**Politics Aff -** China Bashing Now (2/2)

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A survey taken earlier this year by the Pew Research Center found that anxiety about China isn't confined to the right, even if that's where worries about East Asia have been aired most publicly.

In Pew's polling, a plurality of Americans - 20 percent - named China as the greatest international threat to the U.S. That compares with 18 percent who named North Korea and 12 percent who chose Iran.

More Americans pointed to China as the world's foremost economic power than the U.S., by 47 percent to 31 percent, vividly illustrating the electorate's sense of national vulnerability.

Andrew Kohut, who heads the Pew Research Center, said that voters' fears about China are overwhelmingly centered on the economy, which could make it even more relevant to the pocketbook-focused 2012 campaign.

Congress bashing China now – official statements

Rep. Ros-Lehtinen (R-FL) Press Release, 7/1/11

(Ileana, US Federal News Service – Newswire, “CHAIRMAN ROS-LEHTINEN SAYS CHINESE COMMUNIST PARTY, AT 90, STILL BRUTAL PARTY OF MAO URGES ADMINISTRATION TO SPEAK OUT ON CHINA'S HUMAN RIGHTS ABUSES,” Lexis, Accessed July 8, 2011) AC

WASHINGTON, July 1 -- The House Foreign Affairs Committee Chairman issued the following statement:

U.S. Rep. Ileana Ros-Lehtinen (R-FL), Chairman of the House Foreign Affairs Committee, released the following statement today on the Chinese Communist Party (CCP), which was founded on July 1, 1921:

"A foreign implant of the Soviet Union's Comintern, the Chinese Communist Party has a bloody history. Tens of millions have been killed under the CCP's rule.

"The regime in Beijing is using the anniversary of the founding of the CCP to attempt to rewrite history and whitewash its current record.

"The truth is that, at 90, the CCP remains the brutal party of Mao. The present-day Chinese dictatorship oppresses the Chinese people and all those subjugated to its rule, imprisons dissidents, bans religious expression, and turns to violence against innocent people as a means of clinging to power.

"Rather than shrinking away from the topic, the President and the State Department should speak out loudly and frequently against China's terrible human rights record." For any query with respect to this article or any other content requirement, please contact Editor at htsyndication@hindustantimes.com

Rollback/Wolf Clause Answer (1/2)

Plan is consistent with the president’s constitutional authority to conduct international negotiations – trumping Wolf clause

Svitak, Space News, 5-4-11

[Amy, Space News, “China Viewed as Potential U.S. Partner in Future Mars Exploration”, <http://www.spacenews.com/policy/110504-china-partner-mars-exploration.html>, accessed 7-10-11]

Recently enacted legislation prohibits U.S. government collaboration with the Chinese in areas funded by Wolf’s subcommittee, whose jurisdiction also includes the U.S. Commerce and Justice departments, the National Science Foundation and the National Institute of Standards and Technology.

When asked how he interpreted the new law, part of a continuing resolution approved in April that funds federal agencies through Sept. 30, Holdren said the administration will live within the terms of the prohibition.

“I am instructed, after consultation with counsel, who in turn consulted with appropriate people in the Department of Justice, that that language should not be read as prohibiting actions that are part of the president’s constitutional authority to conduct negotiations,” Holdren said. “At the same time there are obviously a variety of aspects of that prohibition that very much apply and we’ll be looking at that on a case by case basis in [the White House Office of Science and Technology Policy] to be sure we are compliant.”

Rep. John Culberson (R-Texas), who joined Wolf last fall in opposing an official visit to Beijing by Bolden, accused Holdren and the White House of plotting to circumvent the law.

“It’s not ambiguous, it’s not confusing, but you just stated to the chairman of this committee that you and the administration have already embarked on a policy to evade and avoid this very specific and unambiguous requirement of law if in your opinion it is in furtherance of negotiation of a treaty,” Culberson said. “That’s exactly what you just said. I don’t want to hear about you not being a lawyer.”

Holdren said a variety of opinions and legal documents indicate the president has exclusive constitutional authority to determine the time, scope and objectives of international negotiations and discussions, as well as the authority to determine the preferred agents who will represent the United States in those exchanges.

Congress cannot ban Obama from negotiating a deal

Cheng, specializes on Asian foreign policy at the Heritage Foundation, 5/9/11

(Dean, senior analyst, first with Science Applications International Corp, “Lost in Space: The Administration’s Rush for Sino–U.S. Space Cooperation”, The Foundry, <http://blog.heritage.org/2011/05/09/lost-in-space-the-administration%E2%80%99s-rush-for-sino%E2%80%93u-s-space-cooperation/>, accessed July 8, 2011, NS)

The Obama Administration appears absolutely intent on engaging the PRC in space cooperation. How else to explain the claim by White House Office of Science and Technology Policy Director John Holdren that the congressional restriction banning U.S.–Chinese space cooperation under just about any circumstances was not, in fact, a ban?

According to Holdren, the White House has concluded that the provision doesn’t extend to “prohibiting interactions that are part of the president’s constitutional authority to conduct negotiations.” That includes, he said, a bilateral agreement on scientific cooperation between the two countries that dates back to 1979. One doesn’t need a presidential signing statement to see that the White House is near-desperate to engage the PRC in space cooperation.

Rollback/Wolf Clause Answer (2/2)

Wolf’s ban doesn’t apply to presidential ability to conduct foreign policy – its Legal

Mervis, Deputy Editor Science Magazine, 5/4/11 (Jeffrey, Science Magazine, 5/4/11, Holdren's Response to Ban on China Science Partnerships Draws GOP Ire, <http://news.sciencemag.org/scienceinsider/2011/05/holdrens-response-to-ban-on-china.html>, Access: 7/13/11)

The Obama Administration has carved out a loophole in the recent congressional ban on scientific interactions with China that would permit most activities between the two countries to continue. But that interpretation doesn't sit well with Republicans in the House of Representatives who drafted the language, one of whom said today that ignoring the ban could imperil funding for NASA or other science agencies.

The ban is part of the 2011 budget approved last month to avert a government shutdown. It was crafted by Representative Frank Wolf (R-VA), a fierce critic of China who chairs a House spending committee that oversees several science agencies. The ban says that no funds can be used by NASA or the White House Office of Science and Technology Policy (OSTP) "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." It also prevents any NASA facility from hosting "official Chinese visitors."

Appearing today before that panel to defend the Administration's 2012 budget request for science, presidential advisor John Holdren told Wolf that, in effect, the ban doesn't apply to the president's ability to conduct foreign policy. That authority, Holdren explained, extends to a bilateral agreement on scientific cooperation that Holdren and China's science minister signed in January that builds upon a 1979 pact that has spawned activities between many U.S. agencies and their Chinese counterparts.

Wolf asked Holdren for his interpretation of the budget language. "It is our intent to live within the terms of that prohibition insofar as doing so is consistent with my responsibilities to execute the president's constitutional authority," said Holdren. "I have been instructed after appropriate consultation ... that the prohibition should not be read as prohibiting interactions that are part of the president's constitutional authority to conduct negotiations. At the same time, there obviously are a variety of aspects of that prohibition that very much apply to OSTP, and we will be looking at that on a case-by-case basis."

Regime Legitimacy Bad Answer

Status quo attempts to reform China through space sanctions is ineffective and backfires

Moltz, Naval Postgraduate School associate professor, 5/11/11

(Dr. James Clay, “Military And Civil Space Programs In China; Committee: Senate U.S.-China Economic And Security Review Commission”, Capitol Hill Hearing Testimony, LexisNexis, accessed 7/1/11) EK

U.S. policy toward China's space program is following respectable but unrealistic goals: to change Chinese human rights policy and military behavior through space sanctions. Sadly, this policy is not working. It is time to explore other options. The marketplace for space technology has become globalized. It is also now much less dependent on U.S. products. For this reason, our strategy aimed at isolating China in space has become ineffective. Other advanced countries recognize the value of the Chinese space market and can produce technologies that are attractive to China. The United States stands aside to its own disadvantage and to the detriment of our space competitiveness. Russians and Europeans have ITARfree products that provide nearly comparable space services. Overly restrictive export controls also harm U.S. political influence in the space field, as emerging countries form ties with China as a favored supplier.

Plan would not legitimate Chinese practices – Soviet-era coop proves

Svitak, Space News, 5-4-11

[Amy, Space News, “China Viewed as Potential U.S. Partner in Future Mars Exploration”, <http://www.spacenews.com/policy/110504-china-partner-mars-exploration.html>, accessed 7-10-11]

Holdren said he admired Wolf’s leadership in calling attention to China’s human rights record, but noted that even when then-U.S. President Ronald Reagan referred to the former Soviet Union as “the evil empire” in the late 1980s, he continued to cooperate with the communist bloc in science and technology if doing so was deemed in the U.S. national interest.

“The efforts we are undertaking to do things together with China in science and technology are very carefully crafted to be efforts that are in our own national interest,” Holdren said. “That does not mean that we admire the Chinese government; that does not mean we are blind to the human rights abuses.”

Holdren said that as White House science adviser, his capacity to influence the president’s diplomatic approach to Beijing is limited.

“I am not the person who’s going to be whispering in the president’s ear on what our stance toward China should be, government to government, except in the domain where I have the responsibility for helping the president judge whether particular activities in science and technology are in our national interest or not,” Holdren said.

Plan wouldn’t cooperate with the PLA – the China National Space Administration is a civilian-only program – it handles coop

Logan, Specialist in energy policy, Congressional Research Service 9-29-08

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China’s space program was initially institutionalized under the People’s Liberation Army (PLA). In a series of government reforms in the 1990s, the China National Space Administration (CNSA) — roughly equivalent to the U.S. National Aeronautics and Space Administration (NASA) — was created under the civilian Commission of Science, Technology and Industry for National Defense. The PLA continues to play a role in China’s overall space activities managing both manned civilian and military efforts, while CNSA handles unmanned scientific projects and international collaboration. China’s space activities and intentions are not transparent; the dual-use nature of most space technology compounds the uncertainties of interpreting Chinese decision making.