Shuttles Case Neg

Shuttles Case Neg 1

Strat Page 2

Inherency Frontline 1NC 3

Inherency—Extension: Status Quo Sustainable—Privatization Solves 5

Space Leadership Frontline 1NC 9

Space Leadership: Extension— Space Leadership Now—No China Challenge 11

Space Leadership: Extension— Space Debris 12

Space Leadership: Extension— Can’t Solve Multilateralism 13

Space Leadership: Extension— Multilateralism Fails—Human Rights 14

Space Leadership: Extension— Multilateralism Fails—Environment 15

Space Leadership: Extension— Multilateralism Fails—Disease 16

Space Leadership: Extension— Multilateralism Fails—Terrorism 17

ISS Frontline 1NC 18

ISS: Extension—Science Diplomacy- No Link 20

ISS: Extension—Science Diplomacy- No impact 21

Solvency Frontline 1NC 22

Politics Link- Plan Popular 1NC 23

Politics Link- Plan Popular 2NC 24

Politics Link- Plan Unpopular 1NC 25

Politics Link- Plan Unpopular 2NC 26

Debt Ceiling Link—Spending 2NC 28

Spending DA Link 1NC 29

Spending DA Link- 2NC 30

Strat Page

**1NC**

**Case Frontlines**

 **Inherency**

 **Leadership**

 **ISS (Science Diplomacy)**

 **Solvency**

**Security K**

**Advantage CP- H1B Visas**

**Politics DA—the plan unpopular links are better than the plan popular ones**

**Spending DA**

**Best 2NR**

**Politics DA**

**Advantage CP- H1B Visas**

**Second Best 2NR**

**Spending DA**

**Advantage CP- H1B Visas**

**General Notes**

**The inherency extensions about privatization are also applicable as answers to their solvency contention. These extensions say that the USFG isn’t key because private companies can solve in the status quo.**

**The advantage counterplan is located in the advantage counterplan file. Fact: it solves their entire aff.**

Inherency Frontline 1NC

1. Cunningham and Olsen concede that we will be reliant on Russia for years regardless of its investments and developments in space exploration—makes their impacts inevitable

**“**But **even if we had a clear direction, we will be reliant on the Russians for transportation to space for a number of years** – at a cost of more than $60 million per seat.”

1. Their Roop evidence is unqualified— firstly, he’s a blogger for a random newspaper, and secondly, the budget cut proposal hasn’t been ratified yet, so it’s not definite that there will be more budget cuts.
2. Status quo is sustainable-- private companies will succeed – they’ll be in space in a year

Tumlinson 7-23-11 Rick Tumlinson is an author, entrepreneur, space advocate and visionary, and co-founder of the Space Frontier Foundation. He is noted as one of the best public speakers in the space field. 7-23-11. “Apollo’s Children and the NewSpace Revolution”.

The shuttle program ended this week just as we celebrated the 42nd anniversary of Apollo. It is poetic and yet sad. It also begs the question, what next? Some, even heroes of Apollo, whine and lament the end of exploration and what they see as the death of our American frontier spirit. To them the end of the government shuttle is a sign of decline, the end of vision and innovation and the beginning of a retreat from a bold new tomorrow. They couldn’t be more wrong. Although those who gave us Apollo can’t see what is happening right in front of them, a NewSpace revolution is sweeping old ways out the airlock, launching a new era in space that will pale all that have come before. Apollo’s children are alive and well. Apollo’s children are the generations raised during our quest for the moon and after who grew up, developed new ideas and business concepts, made millions, sometimes billions, and are now founding the first commercial space firms with their profits. They are also the crazy young millennial dreamers in t-shirts and jeans who look like the revolutionaries of Silicon Valley, and living on caffeine and rock music are designing the spaceships of tomorrow in universities and garages across America. And yes, they can be found in the cubicles of aerospace giants and even NASA centers, quietly slipping new ideas into the old systems. They are the revolutionaries of NewSpace, and to them space isn’t a government program, it is a frontier, and they are going to open it. I have seen them, talked to them, stayed up all night with them and listened to the passion and excitement in their voices. I have heard their crazy and not so crazy ideas and watched as with real pride and humility they’ve run the programs, flipped the switches and turned the knobs to show me their visions, hardware and new technologies. I have watched them cry as they blew up their dreams on desert floors and jump into the air laughing as they watched a not so crazy idea take flight and soar into the blue — then black sky of space. There are dozens of NewSpace companies and teams all across the U.S. with real funding, real technology and who are really flying and building the elements of a new drive into space that will change our civilization. From the deserts of California, Nevada and New Mexico to the mountains of Colorado and the rolling hills of Texas, the woods of Alabama and the shores of Virginia and Florida, NewSpace companies are designing, building, testing and flying very real new rocketships and space facilities that will throw open the airlock of space to all of us. Ironically, the biggest obstacle to the NewSpace revolution isn’t technology or even the dangers of space. It is a Congress and old space establishment who completely and totally doesn’t seem to get it, and in the name of protecting a few old space jobs and their patronage system are still trying to force feed America the old pork-based programs we all know will bloat and blunder their way into cancellation a few years down the road. Although hamstrung by Congressional dinosaurs protecting the old patronage system, even some at NASA are trying to change the agency so it can work with NewSpace rather than try and change NewSpace into old NASA. They know that in the future it will not “do space” for us, but explore space with us and allow us, the children of Apollo, to step up and begin doing our jobs of turning the new domains we enter into new places to live and prosper. We honor the heroes of Apollo by building on their success with successes of our own, and blazing the way forward so the next generation can push the frontier even further. Apollo’s children are alive and well, and contrary to those decrying the end of America in space, they are about to produce a stunning set of achievements, proving once and for all that the right stuff is not just a quality to be found in government employees, but in all of us. I make the following predictions based not on whimsical fancy but real information and the direction of real companies and projects — many of which are already underway, funded and producing hardware, and some of which have already flown or have test articles in space right now — and all are American led or based: Within one year the first non-governmental spaceship will carry a human into orbit. Within two years the first paying customers will be flying regularly to the edge of space. Within three years the first commercial space facility will open its airlock. Within four years the first commercial missions will land on the moon. Within five years multiple spaceships will be serving multiple space facilities including hotels and laboratories. Within six years the world’s first commercial orbital space port will launch a rocket into space. Within seven years the first commercial customer will orbit the Moon and return to Earth. Within ten years the first human outposts will be established on the Moon. Within fifteen years the first astronauts will visit an asteroid. And yes, within the next 20 years the first human will step on the surface of Mars. By the way, it is quite possible she will be a private citizen explorer and will have flown there on a privately funded spaceship. Apollo’s children are alive and well. They are all around you and they need your encouragement, your support and your belief in their dreams — because their dreams are the dreams we gave them. In fact they are many of you, your children, your grandchildren and the legacy we bequeath must not be defeat and denial but glory and the celebration of their genius and ingenuity.

1. Science and government control are incompatible—status quo privatization solves their science diplomacy advantage better

**COSEPUP and PGA 5** (Committee on Science, Engineering and Public Policy, and Policy and Global Affairs, http://www.nap.edu/catalog.php?record\_id=11289#orgs, 7/9/11)

An aspect of S&E strength deserving brief mention is the challenge in integrating scientific research and educational policies with foreign policy. A familiar, if only occasional, overlap between scientific and foreign policy has been seen in the realm of “big science” such as the multinational particle accelerators and detectors at CERN, large telescopes, and international ocean and geophysical projects. Negotiating big science is seldom easy, partly because of the obvious differences between the realms of science and large-scale political structures. Among the most obvious is that many intergovernment research activities are “top-down,” established and monitored by government officials, whereas most research collaborations are “bottom-up,” with scientists choosing partners and applying to government for research support. Traditional research linkages create what were long ago called “invisible colleges”97 of practitioners, below the radar of policymakers. As the globalization of S&E progresses, a better understanding of how to integrate top-down and bottom-up cooperation is needed if nations are to maximize the benefits of their investments in S&E.98 Scientists and engineers trained to work between cultures may be increasingly important as these negotiations proceed, and US students may benefit from overseas postgraduate training and research experience.

Inherency—Extension: Status Quo Sustainable—Privatization Solves

The ULA and SpaceX have tested advanced replacements for the Shuttle – deployed by 2014

Mulroy 6-16-11 James Mulroy is an undergraduate in aerospace engineering and has a lot of experience in research and literature review in composites and rocketry. He also writes articles in PC World. “The Shuttle Program is Winding Down. What Next?”

The Atlas V and the Delta IV are currently the two most probable alternatives that NASA may use to carry astronauts into space. In fact, both the Atlas and the Delta rocket families were being considered as replacements before NASA took on the Constellation Program. Recently the United Launch Alliance (ULA) released documentation (PDF) that the Atlas V and the Delta IV could be human-rated (i.e. able to support manned spaceflight) with certain modifications. Additionally, the Atlas family already has a history of human spaceflight with the Atlas LV-3B--the same vehicle which was used to send astronauts to low Earth orbit for Project Mercury. The Atlas LV-3B logged four human space flights, and other Atlas vehicles logged a number of unmanned space flights under Project Mercury. There are a number of companies which want to use these vehicles for human space flight including Lockheed Martin who wants to Launch the Orion Spacecraft on the Delta IV Heavy, and Bigelow Aerospace who wants to use the Atlas V to bring paying passengers to the Bigelow Space Station, currently under construction. Given the success and history of the human-rated Atlas LV-3B, the Atlas V has a very good chance of itself being human-rated. Both launch vehicles are operated and built by the Lockheed Martin-Boeing joint venture United Launch Alliance. Falcon 9 and Falcon Heavy Falcon Heavy rocket. [Photo: SpaceX] The Falcon Heavy, created by SpaceX, is apparently the most powerful rocket in the world, with a lift capacity of over 117,000 pounds--twice the payload of the next closest vehicle. The Falcon Heavy provides a number of benefits including huge cost savings. According to SpaceX, the "2012 Air Force budget includes $1.74B for four launches, an average of $435M per launch. With Falcon Heavy priced at $80-125M per launch SpaceX has the potential to provide the US government significant value. In addition, the medium-lift Falcon 9 could support a number of medium-lift Air Force launches at only $50-60M per launch, if SpaceX were allowed to compete for this business." At a quarter of the cost of current launch systems, the Falcon Heavy is surely to become extremely competitive against the Atlas and Delta rocket families which cost a large fortune. SpaceX says that its Falcon 9 rocket could be ready for manned spaceflight in 2014; the company tells us that NASA recently awarded it a $75 million contract to upgrade the Falcon 9 to being human-rated. Not only that, but Elon Musk says that they will try to put a man on Mars by 2020.

SpaceX is incredibly successful in funding and accomplishments – they’ll have men in space in three to four years

Crocker ‘11 Ronnie Crocker is a reporter for the Houston Chronicle. 6-1-11. “Bringing the Heavens to the Masses”.

Nine-year-old SpaceX has amassed more than $3 billion in contracts for 35 spaceflights, including at least 12 to ferry cargo to the International Space Station after NASA concludes its shuttle program this summer. Two weeks ago, it was one of four private companies awarded a share of $270 million in NASA seed money to develop ways to take human crews to the station as well, "ending the outsourcing of this work to foreign governments," as agency Administrator Charles Bolden put it. SpaceX has notched other accomplishments, both on paper and in orbit: Last summer, it signed the largest commercial contract ever for a single launch, a $492 million deal to deliver satellites for Iridium Communications. In December, SpaceX became the first private enterprise to launch a space capsule into orbit and recover it after splashdown. Previously, this feat had been accomplished only by national space programs. To much fanfare last month, SpaceX announced details for its next venture, the Falcon Heavy, billed as the world's most powerful rocket, with nearly twice the payload capacity of the shuttle. And it's made a former U.S. Navy weapons site in McGregor a $50 million, 130-employee link in a chain of operations that runs from Southern California - where SpaceX is based and where it builds the Falcon rockets and the Dragon space capsule - to launch pads in Florida, California and on an atoll in the South Pacific. There's a SpaceX office in Washington, D.C., for lobbying lawmakers and soon there will be one in Houston to coordinate better with NASA. The company's stated goal is to make commercial launches cheaper and more reliable while moving humanity closer to an even grander day envisioned by SpaceX founder Elon Musk. There's a reason the Dragon capsule will have windows even though its initial missions are for cargo only. "We're on a path to being a multiplanet civilization," Musk said in a recent interview. He called it "the next great step in evolution." SpaceX has grown steadily since its June 2002 founding by Musk, a native South African who made his entrepreneurial fortune at a young age, building and selling the companies Zip2 and PayPal. He's also the CEO of Tesla Motors, with which he aims to bring electric cars to the masses. At SpaceX, too, Musk is determined to make spaceflight as affordable as it is reliable. He invested heavily with his own money and says the company's profit margin will depend on how innovative it can be. He posts on the SpaceX website how much he will charge - the most recent rate quoted is a little less than $60 million for a cargo flight. "The cost of space launch has to come down," Musk said, "just as it has in every other mode of transportation." That commitment is shared by Ken Bowersox, a NASA veteran of five trips to space whom Musk hired two years ago as vice president of astronaut safety and mission assurance. Bowersox, who splits his time between Houston, the California headquarters and other SpaceX outposts, speaks passionately about the design improvements he's seen there and the myriad ways in which private industry can operate more efficiently outside the shackles of government bureaucracy. "What's really unique about SpaceX is its desire to lower costs in the industry," he said. Analyst Jeff Foust of Futron Corp. agreed that the company has positioned itself well for the emerging era of private spaceflight through its technical accomplishments and a diverse client list that is not solely dependent on government. And while cost-cutting has not traditionally been a priority for even private customers - "You're not going to jeopardize a $200-million- to $300- million-satellite to save a few bucks on launch costs," Foust said - companies that provide reliable service at lower rates will no doubt benefit in the future. "It's up to SpaceX to build on the success they've had," Foust said. Musk, 39, is comfortable with the expansive language of physics, which he studied at the University of Pennsylvania. For the first time in Earth's 4 billion-year history, he said, the technology to expand to other planets is attainable and we must take advantage before it's too late. He pledged his company will begin manned spaceflight by mid-decade. "Internally, we're going for no more than three" years, said Musk. "I'm confident it will be no more than four." Bowersox, who spent a total of seven months in space, said travel beyond low-Earth orbit and perhaps even nascent space colonies could come faster than many expect. "This isn't a hundred years away before we're doing this," he said. To help make ours a true spacefaring civilization, Musk has assembled not just contracts and cash but a committed workforce that is 1,300-strong today and expected to double within a few years. "The difference between a pipe dream and his vision," said one of those workers, spokeswoman Kirstin Brost, "is that he's figured out a way to pay the bills in the meantime."

SpaceX launched the Falcon Heavy which carries twice as much as the space shuttle

Albanesius 7-14-11 Chloe Albanesius worked for a year covering financial IT on Wall Street for Incisive Media. From 2002 to 2005, Chloe covered technology policy for The National Journal's Technology Daily in Washington, DC. She graduated with a bachelor's degree in journalism from American University in Washington, D.C. “Space-X Breaks Ground on Vandenburg Rocket Launch Site”.

Commercial spaceflight company Space Exploration Technologies (SpaceX) on Wednesday broke ground on the Vandenberg Air Force Base launch site for the Falcon Heavy, the world's largest rocket. Elon Musk, SpaceX CEO and chief rocket designer, joined California Lt. Gov. Gavin Newsom, 30th Space Wing Commander Colonel Richard W. Boltz, and Lompoc Mayor John Linn to get things started on the site, which is expected to be operational late next year. SpaceX unveiled plans for the Falcon Heavy in April. It will be capable of carrying over 117,000 pounds to orbit, the equivalent of an entire commercial airplane full of passengers, crew, luggage, and fuel. Its 27 engines have 3.8 million pounds of thrust, which is equivalent to 15 747s at full power. According to SpaceX, this new rocket will have twice the performance of the Delta IV Heavy, which launched from California's Vandenberg Air Force Base in January. The Falcon Heavy is set to arrive at Vandenberg at the end of 2012, with its inaugural flight to follow soon after. SpaceX plans a launch from its Cape Canaveral site in 2013 or 2014. Commercial rockets like the Falcon Heavy are in line to take over for NASA's shuttle program, which will retire when Atlantis returns from the International Space Station next week. NASA is set to focus on deep-space exploration, while commercial vehicles will handle transport missions to the ISS. SpaceX said the Falcon Heavy has twice the capacity of the space shuttle. In 2008, NASA awarded SpaceX a launch services contract that allowed it to compete for missions using the Falcon 1 and Falcon 9 launch vehicles. The Falcon 9 rocket and its Dragon test capsule launched successfully from Florida's Kennedy Space Center in December, the first successful launch for NASA's Commercial Orbital Transportation Services (COTS) program. SpaceX also has more than $2.5 billion in contracts to deliver satellites to orbit in the next few years, and in November, it obtained a license from the FAA to re-enter a spacecraft from orbit. Still, Wednesday's release complained that United Launch Alliance, a joint Boeing-Lockheed Martin venture that produced the Delta IV Heavy, has "a sole-source monopoly contract for Defense Department business." "These are difficult fiscal times for our federal government and the Falcon vehicles can save the Department of Defense almost $2 billion per year in launch costs, while increasing reliability and capability," Musk said in a statement. "This presents a great opportunity for the DoD to avoid cancelling other programs and minimize reductions in personnel as budgets contract."

Only private companies solve for the long run – end of the Shuttle only proves

Simberg 7-19-11 Rand Simberg is an adjunct scholar at the Competitive Enterprise Institute, is an aerospace engineer and a consultant in space commercialization. “How Congress sabotages Space Exploration”

With the Shuttle’s retirement this week, the nation is now dependent on the Russian Soyuz to not only get its astronauts to and from the ISS, but to continue to provide the “lifeboat” in the event of an emergency in orbit. There is now no backup to that system — if something goes wrong with it, we will have no access at all, which could be disastrous for not just those aboard the station, but for the facility itself. This situation has led some (including some who should know better) to panic and go off on flights of fancy about keeping the system going. Even former NASA administrator Mike Griffin, who created a controversy a few years ago by declaring the program a “mistake,” is now saying that it should go on. But it’s simply impossible at this point to close the “gap” with the Space Shuttle. As former Shuttle program manager Wayne Hale warned at his blog three years ago , the supply chain of expendable parts (such as external tanks) is gone, and couldn’t be recreated for two or three years. And beyond that, it would simply be impractical to fly safely with only three orbiters left. The end of the Shuttle program ends more than the Shuttle era. Historians in the future will note that it ended a false notion, one half a century old: that humanity would open up space through the application of command-economy government programs. The future, even the immediate future, of human spaceflight lies not with a single type of vehicle developed by and for a massive government bureaucracy, but with public/private partnerships that create a robust, competitive commercial spaceflight industry. This is the only practical way forward to close the gap between the end of the Shuttle and new domestic capability that will eliminate our reliance on the Russians.

Private space companies succeed – government programs get bogged down in bureaucracy

Simberg 7-19-11 Rand Simberg is an adjunct scholar at the Competitive Enterprise Institute, is an aerospace engineer and a consultant in space commercialization. “How Congress sabotages Space Exploration”

Fortunately, while they can slow down American enterprise, they can’t stop it (unless they make it illegal for private entities to go into space). SpaceX, United Launch Alliance, Boeing, Sierra Nevada, Bigelow Aerospace and others are going to continue to move forward and some time, probably within the next year (particularly if SpaceX docks a Dragon capsule with the ISS later this year, as currently planned), will be looking better and better. In fact, in an authorization committee hearing last week with administrator Bolden, even some of the committee members are starting to understand the implications of their disastrous policy preferences: “We’re still talking late this decade, early ’20s before we have a human-rated [SLS] vehicle,” [Bolden] said. That, a member of the committee later noted, makes it unlikely the MPCV would be able to serve as the backup for commercial providers for accessing the ISS unless the station’s life is extended beyond 2020. As the commercial providers continue to meet critical milestones at modest costs, and the government rocket program continues to be bogged down in mismanagement and bureaucracy, just as Constellation was, it will become clear to everyone else in Congress that we cannot afford to continue to do space business as usual as the nation becomes more and more fiscally strapped. As not just the Shuttle era, but the government-directed human spaceflight era ends, we’re finally going to get a space program that looks like America, whether the defenders of the status quo like it or not.

Private companies will always outperform the government in space: more efficient and faster

Dyson 1-20-11 Esther Dyson has a degree in economics from Harvard. Dyson and her company EDventure specialized in analyzing the impact of emerging technologies and markets on economies and societies. She has also been in Zero-G. “Enter the Dragon”.

In 1957, the Soviets beat the Americans into space by launching the world's first orbiting satellite. For Americans, the so-called "Sputnik moment" was a wake-up call that pushed the United States to increase investment in technology and science education. Months later, the United States launched the Explorer 1 satellite, and the space race was on. Children were encouraged to study math and science, and American know-how helped the U.S. meet the challenge. But the space program has slowed down dramatically since then and in early December, President Obama talked of the need for a new "Sputnik moment" to revitalize America's once-leading role in technology. Ironically, that moment happened two days later, but with lamentably little media coverage. This Sputnik moment—actually a "Dragon moment"—delivered a somewhat different message. On Dec. 8, an American company, SpaceX, founded by an immigrant and financed mostly by private U.S. investors, successfully launched the Dragon spacecraft into orbit and then recovered it from a splashdown in the Pacific Ocean. The message is not just that STEM (science, technology, engineering, and math) education is necessary, but also that this achievement by a private company cost just a fraction of NASA's budget in money and time. Governments are great at funding and carrying out research, but competitive private companies motivated by profit and glory tend to be more efficient and speedier in applying the results. One example: Right before the launch, SpaceX engineers found a few cracks in the second-stage engine nozzle extension. Rather than haul the spacecraft back to the shop for repairs, they simply analyzed the flaw, trimmed off the affected section, and proceeded with the launch. (To be sure, they might have acted differently had the Dragon been carrying humans.) The lesson of the Dragon launch is not that NASA is clueless but that government research agencies should not run routine operations that could be better handled by businesses. (NASA in particular has been constrained by years of political infighting and patronage in the Congress, to the point where its mission seems to be employment maintenance rather space exploration.)

Private companies succeed – competition and risk-taking

Dyson 1-20-11 Esther Dyson has a degree in economics from Harvard. Dyson and her company EDventure specialized in analyzing the impact of emerging technologies and markets on economies and societies. She has also been in Zero-G. “Enter the Dragon”.

But back to the Dragon, which succeeded for a number of reasons. First and foremost, SpaceX is a private company. Someone's own money is at stake, so it is not wasted. Its founder, Elon Musk, an immigrant from South Africa (who in his spare time also runs Tesla, the electric-car company), funded it with his own money (which he earned at PayPal, another startup) and that of other private investors. (Yes, SpaceX does have contracts with NASA, but for a fixed price per launch.) The emphasis at SpaceX is on getting the job done, rather than just doing the job. Whereas governments and government contractors generally enjoy job security, private companies know that the money may run out. Also, private companies compete. Behind SpaceX is a crowd of other private companies developing spacecraft, including Masten Space Systems, Armadillo Aerospace, Blue Origin, and XCOR Aerospace (a company I invest in). These companies aren't all competing to build precisely the same kind of vehicle. In fact, each considers its own approach superior. This kind of redundancy is actually efficient in the long run, as each player experiments and all of them learn from everyone's failures and successes. In the meantime, each of them is competing not for a single grand prize but for a share of a growing market, risking investors' money and their own reputations. It is this free-market economy, which rewards useful innovation and purposeful risk-taking, that we should honor and recognize. The U.S. government (or European governments, for that matter) can't get us out of our current economic mess any better than they can get us to the moon at this point. In most areas of endeavor, the government should be a demanding customer rather than a provider (or subsidizer). In the United States, government fostered the airline business—largely by buying cargo services from private airlines. It also built what became the Internet—and then sensibly left most of the development and day-to-day operations to the private sector. Now, under Obama's new and sensible space policy, the U.S. government is planning to focus on flying to Mars and so-called "near-Earth objects," purchasing routine transportation to the International Space Station from companies such as SpaceX (instead of from the Russian space program at $60 million or so per astronaut for every round trip). What the Dragon moment makes clear is that the ability to commercialize innovation, not just to create it, is what has made the U.S. economy so robust over the long run.

Space Leadership Frontline 1NC

1. Impacts inevitable— space debris makes space flight impossible

Eichler and Rex’ 90, P. Eichler, D. Rex, Technical University of Braunschweig, 1990. Chain reaction of debris generation by collisions in space- a final threat to space flight?

<http://www.sciencedirect.com/science?_ob=MImg&_imagekey=B6V1N-4811KBY-3J-1&_cdi=5679&_user=4257664&_pii=009457659090043K&_origin=&_coverDate=12%2F31%2F1990&_sk=999779999&view=c&wchp=dGLbVlW-zSkWB&md5=cfd5575ebd6e80c3194f339bcf6434e7&ie=/sdarticle.pdf>

The number of man made objects orbiting around the earth has already reached a level that the collision risk has become a serious consideration for all larger spacecraft. However, a far greater threat to spaceflight in general may emerge: the debris generated by collisions in space can initiate a self sustained chain reaction which could lead to the formation of an artificial debris belt. Spaceflight could then become impossible in certain altitude regions for many centuries. As a result of the detailed analysis, it was found that the population of larger space objects is of decisive importance for the fragment generation by collisions. The critical population for the setting-in of a chain reaction is only about 2 to 3 times the current population and could be reached within 20 to 50 years, if spaceflight activities will be continued as in the past. Therefore, within this time frame the number of larger space objects must be limited, e.g. by active controlled reentry manoeuvres after the end of their missions.

1. Multilateralism can’t solve— US military dominance makes other countries suspicious

**Layne 6**, Christopher Layne, associate professor at the Bush School of Government and Public Service at Texas A&M University, 2006, “The Peace of Illusions”, 141.

Prophylactic multilateralism cannot inoculate the United States from counter hegemonic balancing, because no fig leaf is big enough to cover the fact of U.S. power. Moreover, what the feisty Brooklyn Dodger manage Leo Durocher said about baseball is also true in international politics: nice guys finish last. A great power does not become a hegemon by acting nice to others—and they know it. The United States can profess a due regard for others' interests and a commitment to multilateralism, but everyone knows that whenever it chooses to do so it can break free from multilateralism's constrains and use its **power unilaterally to others' detriments**. Hence, in a unipolar world, others must focus on the hegemon's capabilities (which more or less, are knowable), not its intentions (which are difficult to ascertain and can change) 3v If, by some chance, other states did not know this before (and it's pretty clear that many of them did), they know it after the U.S. invasion of Iraq.

1. No solvency—the countries that currently pose threats to US leadership aren’t the ones that will be cooperating. If it’s true that Russia and China are building up their space programs, it’s naïve to think they’ll willingly forfeit leadership of space.
2. Multilateralism fails—it implies accepting constraints on domestic policy choices, which other countries aren’t willing to do

**Walter’9**, Andrew Walter, Department of International Relations, London School of Economics. “The Mismanagement of Global Imbalances: Why Did Multilateralism Fail?”

http://personal.lse.ac.uk/wyattwal/images/Mismanagement.pdf

Multilateralism failed to manage global imbalances, I suggest, for two different and deeply political reasons. First, the failure reflected a persistent unwillingness among all major countries, not just China, to accept the political costs of adjustment and a related shift to different models of economic growth. I argue below that China is indeed an outlier among the G-4 (consisting of the US, EU, Japan, and China), but only because it is relatively poor, unusually open, and has opted for exchange rate targeting rather than inflation targeting. It does resist external policy constraint, but in this regard it is little different to other major countries. Second, the failure reflected the complete inadequacy of the existing multilateral policy surveillance framework inherited from the era of G-7 dominance to facilitate the negotiation of the necessary domestic and international political bargains. In order for multilateralism to become more effective in the future, 6 these flaws would need to be resolved, but it is difficult to see how major governments will accept the constraints on domestic policy choices that this would entail.

1. Unipolar configurations of multilateralism fail to deter conflicts—we still invaded Iraq and Afghanistan
2. Funding our space program promotes unilateralism which threatens and angers others—diminishes chance of cooperation.
3. Space Dominance now

Pike 02 (John E.,national security analyst and director and founder of [GlobalSecurity.org](http://en.wikipedia.org/wiki/GlobalSecurity.org). An easily accessible [pundit](http://en.wikipedia.org/wiki/Pundit_%28expert%29), he was active in opposing the Strategic Defense Initive, and [International Traffic in Arms Regulations](http://en.wikipedia.org/wiki/International_Traffic_in_Arms_Regulations), and consulting on [Near-Earth objects](http://en.wikipedia.org/wiki/Near-Earth_object) that are potential threats to the Earth. He attended [Vanderbilt University](http://en.wikipedia.org/wiki/Vanderbilt_University) as an undergraduate, where he studied technology and public policy) http://www.sipri.org/yearbook/2002/files/SIPRIYB0211.pdf

At the risk of over-simplification, it can be said that both proponents and critics of US space power would probably agree on a few core propositions. The USA enjoys a global preponderance of conventional military power that is unrivalled in human history. Its power-projection capabilities are uniquely enabled by military space systems. The Bush Administration is committed to ensuring this dominance for the USA and denying it to other countries. Ballistic missile defense, much of it based in space or dependent on space systems, is a critical element of ‘full-spectrum dominance’ to the extent that it denies adversaries the opportunity to offset US conventional supremacy through the resort to weapons of mass destruction. Of course, proponents and critics may differ as to the possibility and desirability of the realization of this vision.

Space Leadership: Extension— Space Leadership Now—No China Challenge

No China challenge – lack air power

Robert Karniol, (Defence Writer) 7/18/11 The Straits Times Singapore “China not yet a formidable air power; Inability to build a top jet engine weak spot in military aviation sector” Lexis.

CHINA can send a man into space and a rocket into lunar orbit but, paradoxically, its defence industry cannot build a top-end aircraft engine. Or an engine sophisticated enough to power advanced surface ships and armoured vehicles. But this broad statement requires a caveat: China's defence industry can indeed design, develop and produce propulsion systems for relatively simple military platforms - certain transport aircraft, patrol boats, some types of main battle tanks and armoured personnel carriers. But high-performance combat aircraft, destroyers and similarly demanding platforms are another matter. Only submarines appear an exception to this general rule. Most new types are fitted with locally developed propulsion systems, although the technology's origins are not known. This technical shortcoming was most recently highlighted in a report in the Russian newspaper Vedomosti stating that Beijing last month bought 123 AL-31FN turbofan engines from Russian manufacturer NPO Saturn. These cost over US$500 million (S$609 million). The order follows earlier tranches that since 2001 have totalled 930 engines. The AL-31FN currently powers China's J-10 multi-role fighter and J-11A/B air superiority fighter, as well as the J-15 carrier-based fighter which is under development. Russia's Klimov RD-93 engine is fitted on the Chinese JF-17 multi-role fighter and FC-1 attack fighter. A French engine drives the Z-11 helicopter and an American one powers the civilian ARJ-21 jet airliner. Indicative of this trend elsewhere in the People's Liberation Army, the navy's Song-class submarine has MTU diesel engines from Germany while the Luhai-class destroyer has Ukrainian gas turbines and German diesels. Among ground forces, the ZBL-09 8x8 infantry combat vehicle is fitted with a Deutz engine from Germany and the Type 99 main battle tank has a locally produced power plant derived from German technology. Just a handful of companies worldwide have truly mastered the engineering challenge of developing high-performance engines, and China's dependence on foreign suppliers is deeply problematic for Beijing. But a new report concludes that change may be imminent. Mr Gabe Collins and Associate Professor Andrew Erickson, in a comprehensive study published recently by specialist website China SignPost, focus on military jet power plants. 'The Chinese aerospace industry is driven by four strategic imperatives as it pursues the ability to manufacture large volumes of high-performance aircraft engines - parts dependence avoidance, Russian supply unwillingness, aircraft sales autonomy and poor Russian after-sales service,' the authors state. They say that quality control remains spotty, resulting in problems with reliability, and key weak points include turbine blade production and process standardisation. Beyond these issues, '(China) appears to remain limited with respect to components and systems design, integration and management... and to making logistical and operational plans at the force level based on reliable estimates thereof'.

Space Leadership: Extension— Space Debris

The aff doesn’t solve space debris collisions—this threatens future space activities

Seishiro et al.’4, Kibe Sieshiro, Kawamoto, Satomi, Okawa, Yasushi, Terui, Fuyuto, Nishida, Shin-Ichiro, and Gabriele Gilardi, 2004.

R&D of an Active Removal System for Post Mission Space Systems. Science and Technology Series. Vol. 109, no. Space Debris Space Traffic Management 2003, pp. 449-462.

It is widely recognized that Space Debris is becoming a serious threat to human space development activity. Unless steps are taken now, cascading collisions might cause an exponential increase in the quantity of small size debris and inhibit our future activities in space. The best way to mitigate the problem of debris pollution around the earth is not to generate any new debris from now on. Furthermore, de-orbiting or re-orbiting space systems to minimize the possibility of collisions with other debris, which generate great quantities of dangerous small size debris, is also believed to be an effective and indispensable countermeasure.

Space Leadership: Extension— Can’t Solve Multilateralism

Multilateralism will fail in a world of US heg—the US will continue to act in ways inconsistent with international objectives

**Newman et al’6**, Edward Newman, of Studies on Conflict and Security in the Peace and Governance Programme of the United Nations University,Tokyo, Japan, Ramesh Thakur, Senior-Vice Rector of the United Nations University, Japan and a UN Assistant-Secretary- General and John Tirman, Director of the Center for International Studies at the Massachusetts Institute of Technology 2006. “Multilateralism Under Challenge? Power, International Order, and Structural Change” http://i.unu.edu/unu/u/publication/000/002/308/1129-multilateralismunderchallenge.pdf

The concern is not so much a United States that acts unilaterally as opposed to multilaterally, but one that takes actions inconsistent with many of the objectives sought by the rest of the international community, one that proclaims rights and actions for itself while denying them to others, one that actually exacerbates the problems it is trying to remedy, and one that manufactures threats. According to many observers, one of the most critical deficiencies of multilateralism relates to weapons of mass destruction, and the acrimony at the review conference for the Nuclear Non-Proliferation Treaty in 2005 was symptomatic of this. Trevor Findlay’s chapter addresses the strains under which multilateral approaches to weapons of mass destruction are currently operating. He argues that the pivotal player in this field is the United States, and the neoconservative agenda has been particularly unilateralist and obstructionist in respect of multilateral activity pertaining to WMD.

Space Leadership: Extension— Multilateralism Fails—Human Rights

Multilateralism fails to solve for human rights

**Newman et al’6**, Edward Newman, of Studies on Conflict and Security in the Peace and Governance Programme of the United Nations University,Tokyo, Japan, Ramesh Thakur, Senior-Vice Rector of the United Nations University, Japan and a UN Assistant-Secretary- General and John Tirman, Director of the Center for International Studies at the Massachusetts Institute of Technology 2006. “Multilateralism Under Challenge? Power, International Order, and Structural Change” http://i.unu.edu/unu/u/publication/000/002/308/1129-multilateralismunderchallenge.pdf

One issue area in which there has been broad criticism of multilateral institutions in recent years is human rights. Richard J. Goldstone and Erin P. Kelly explore the crisis of legitimacy which characterizes human rights multilateralism in ‘‘Progress and problems in the multilateral human rights regime’’. They consider if the human rights regime is fundamentally at odds with the principle of sovereignty and statehood, upon which the multilateral system is built. In so doing, they describe the historical and doctrinal foundations of human rights law, and then consider a series of institutional challenges to the regime. The human rights regime has achieved success in establishing the legal foundation for human

rights and creating certain enforcement mechanisms. Nevertheless, they argue that the most threatening challenges to the long-term viability of the human rights regime relate to massive human rights violations committed in failed states and in the context of civil armed conflict.

Space Leadership: Extension— Multilateralism Fails—Environment

Multilateralism fails to address environmental challenges

**Newman et al’6**, Edward Newman, of Studies on Conflict and Security in the Peace and Governance Programme of the United Nations University,Tokyo, Japan, Ramesh Thakur, Senior-Vice Rector of the United Nations University, Japan and a UN Assistant-Secretary- General and John Tirman, Director of the Center for International Studies at the Massachusetts Institute of Technology 2006. “Multilateralism Under Challenge? Power, International Order, and Structural Change” http://i.unu.edu/unu/u/publication/000/002/308/1129-multilateralismunderchallenge.pdf

The record of multilateral institutions in addressing environmental challenges is explored by Joyeeta Gupta. She argues that environmental multilateralism is under challenge in eight ways: the non-participation of hegemons and particularly the United States in key environmental regimes; the nature of public goods and free riding; a lack of good governance at the national level; the weakening role of the state; the rising role of non-state actors; the general capacity problems of developing countries; the rise of hybrid relationships; and the rise of bilateralism.

Space Leadership: Extension— Multilateralism Fails—Disease

Multilateralism fails to solve diseases like AIDS

**Newman et al’6**, Edward Newman, of Studies on Conflict and Security in the Peace and Governance Programme of the United Nations University,Tokyo, Japan, Ramesh Thakur, Senior-Vice Rector of the United Nations University, Japan and a UN Assistant-Secretary- General and John Tirman, Director of the Center for International Studies at the Massachusetts Institute of Technology 2006. “Multilateralism Under Challenge? Power, International Order, and Structural Change” http://i.unu.edu/unu/u/publication/000/002/308/1129-multilateralismunderchallenge.pdf

Gwyn Prins, in his chapter ‘‘AIDS, power, culture and multilateralism’’, similarly argues that multilateral approaches to addressing HIV/ AIDS are fundamentally limited. He considers if ‘‘new threats’’, such as HIV/AIDS, by their nature bring into question the viability of multilateralism, and argues that the evidence points in rather unexpected directions. Indeed, he suggests that we are not witnessing traditional state- INTRODUCTION 11 centric multilateralism being undermined by a unilateralist hegemon; rather we see multilateral opportunities being eroded in spitefulness to the USA by countries which claim to promote multilateralism. Moreover, the USA, via its science and pharmaceutical establishments, its statistical arm (the US Bureau of Census) and its specific funding initiative (the President’s Emergency Plan for AIDS Relief), is the prime positive actor. Prins also argues that the pandemic has been allowed to become worse than it might have been by the unwillingness of the state-centric international community to challenge the dangerous exercise of sovereign power – including the self-restraint that ‘‘political correctness’’ imposes on criticism of postcolonial, especially African, rulers and states. Specific obstacles to multilateral progress are, according to Prins, intellectual property rights and market-driven constraints.

Space Leadership: Extension— Multilateralism Fails—Terrorism

Multilateralism fails to solve terrorism

**Newman et al’6**, Edward Newman, of Studies on Conflict and Security in the Peace and Governance Programme of the United Nations University,Tokyo, Japan, Ramesh Thakur, Senior-Vice Rector of the United Nations University, Japan and a UN Assistant-Secretary- General and John Tirman, Director of the Center for International Studies at the Massachusetts Institute of Technology 2006. “Multilateralism Under Challenge? Power, International Order, and Structural Change” http://i.unu.edu/unu/u/publication/000/002/308/1129-multilateralismunderchallenge.pdf

Terrorism, too, is an issue area with which existing multilateral institutions have been brought into question. Edward C. Luck’s chapter, ‘‘The uninvited challenge: Terrorism targets the United Nations’’, suggests that the UN’s response to terrorism has been tentative and even ambivalent, but also in some respects positive. He considers various explanations for this related to geopolitics, US leadership, ambivalence about American power, and constraints imposed by the UN Charter and international law.

ISS Frontline 1NC

1. The status quo is sustainable—their AP 11 concedes neither China nor Russia are threats
2. **“China has lagged behind 20 to 40 years behind us in developing space programs and has no intention of challenging US dominance in space”**
3. **Russia isn’t getting anywhere—it hasn’t set a timeframe for developing a moon base**
4. Science diplomacy is strong now – science envoys and centers of excellence

Koenig ’09 (Robert Koenig, Science staff writer, 6/5/2009, "Fuzzy Spots in Obama's Science Diplomacy," http://blogs.sciencemag.org/scienceinsider/2009/06/fuzzy-spots-in.html]

Administration officials are scrambling to add substance to President Barack Obama’s new Middle Eastern science diplomacy initiatives, mentioned Thursday in his speech in Cairo. The President promised new “science envoys,” centers of excellence, and a “technological development” fund for the Middle East, North Africa, and Southeast Asia. The State Department and White House Office of Science and Technology Policy (OSTP) were working today to bring those words into focus. “Details of these initiatives will be crafted in discussion with officials in the nations where they will be based,” said OSTP spokesman Rick Weiss. Nina V. Fedoroff, science adviser to the Secretary of State and the Agency for International Development, said that proposals for centers of excellence “have been bubbling up from several different directions” with emphasis on issues such as agriculture and public health. A State Department fact sheet explained that the United States “will work with educational institutions, NGOs and foreign governments” to decide the focus and location of such centers. The new “science envoys” program could follow the lines of a bill sponsored by Sen. Lugar (R–IN) and approved by the Senate Foreign Relations Committee that would deploy prominent scientists on missions of goodwill and collaboration. Fedoroff said such efforts would dovetail with evolving State Department science diplomacy programs. Obama also announced a new regional fund to support technological development in Muslim-majority countries. The fact sheet said the fund would help pay for “S&T collaboration, capacity development” and innovations with commercial potential.

1. No internal link—their evidence was written by “**IAmScientist”—no qualifications for determining what results in loss of science diplomacy. Also, it cites alternative internal links to science diplomacy like the** Cassini-Huygens Mission.
2. No link-- space activities are the result of diplomatic improvement—not vice versa

Oberg 06 (By James E. Oberg, writer and consultant in Houston. A 22-year veteran of NASA mission control, he is the author of numerous books on space, 6/27/06, Presentation at the Workshop on Space, Strategy, and China’s Future Air War College Center for Asian Strategic “The U.S. and China: What ‘Common Ground’ in Outer Space?”, Marshall Policy Outlook, http://www.marshall.org/pdf/materials/443.pdf)

Rocketry Realism But a more cold-blooded assessment suggests that Precourt and others are just responding to the truism that “there is no up or down in space,” and they actually are standing on their heads. Their views have treated space cooperation and international relations in a precisely inverse, 180 degrees off, alignment. They have confused cause and effect, and reversed their roles. Handshakes in orbit do not lead to unclenched fists on Earth, neither in 1975 (with Apollo-Soyuz) nor in 1995 (with Shuttle-Mir), nor will they when and if a Chinese spaceship visits the international space station. The robin does not bring the spring, the cock does not bring the sunrise (although their bird brains may think so). And the astronauts, however skilled and courageous their performances, did not overthrow the old tensions of world diplomacy. No, space cooperation is a consequence of improved ground-based relations. It is used by national governments as a display of trends already decided upon. The diplomatic improvement comes first, and space activities reflect it, never the other way around. Yet that’s not the viewpoint most widely expressed. Instead, we get assertions such as this from Sabathier and Faith’s essay: “Much as Russian participation in the international space station was preceded by the famous Apollo-Soyuz mission during the Cold War, Chinese participation in the international space station can be a precursor for cooperation in decades to come.”16 We need to say this again. The birds do not bring either the spring or the sunrise, no matter what THEY think. And hugging astronauts and cosmonauts, despite their equally misplaced confidence in their own significance and importance, do not bring peace and security, neither in the past nor in the future.

1. No impact to science diplomacy

**Dickson 10** (David, director of SciDev, June 28 http://scidevnet.wordpress.com/category/science-diplomacy-conference-2010/ 7/9/11)

There’s a general consensus in both the scientific and political worlds that the principle of science diplomacy, at least in the somewhat restricted sense of the need to get more and better science into international negotiations, is a desirable objective. There is less agreement, however, on how far the concept can – or indeed should – be extended to embrace broader goals and objectives, in particular attempts to use science to achieve political or diplomatic goals at the international level. Science, despite its international characteristics, is no substitute for effective diplomacy. Any more than diplomatic initiatives necessarily lead to good science. These seem to have been the broad conclusions to emerge from a three-day meeting at Wilton Park in Sussex, UK, organised by the British Foreign Office and the Royal Society, and attended by scientists, government officials and politicians from 17 countries around the world. The definition of science diplomacy varied widely among participants. Some saw it as a subcategory of “public diplomacy”, or what US diplomats have recently been promoting as “soft power” (“the carrot rather than the stick approach”, as a participant described it). Others preferred to see it as a core element of the broader concept of “innovation diplomacy”, covering the politics of engagement in the familiar fields of international scientific exchange and technology transfer, but raising these to a higher level as a diplomatic objective. Whatever definition is used, three particular aspects of the debate became the focus of attention during the Wilton Park meeting: how science can inform the diplomatic process; how diplomacy can assist science in achieving its objectives; and, finally, how science can provide a channel for quasi-diplomatic exchanges by forming an apparently neutral bridge between countries. There was little disagreement on the first of these. Indeed for many, given the increasing number of international issues with a scientific dimension that politicians have to deal with, this is essentially what the core of science diplomacy should be about. Chris Whitty, for example, chief scientist at the UK’s Department for International Development, described how knowledge about the threat raised by the spread of the highly damaging plant disease stem rust had been an important input by researchers into discussions by politicians and diplomats over strategies for persuading Afghan farmers to shift from the production of opium to wheat. Others pointed out that the scientific community had played a major role in drawing attention to issues such as the links between chlorofluorocarbons in the atmosphere and the growth of the ozone hole, or between carbon dioxide emissions and climate change. Each has made

essential contributions to policy decisions. Acknowledging this role for science has some important implications. No-one dissented when Rohinton Medhora, from Canada’s International Development Research Centre, complained of the lack of adequate scientific expertise in the embassies of many countries of the developed and developing world alike. Nor – perhaps predictably – was there any major disagreement that diplomatic initiatives can both help and occasionally hinder the process of science. On the positive side, such diplomacy can play a significant role in facilitating science exchange and the launch of international science projects, both essential for the development of modern science. Europe’s framework programme of research programmes was quoted as a successful advantage of the first of these. Examples of the second range from the establishment of the European Organisation of Nuclear Research (usually known as CERN) in Switzerland after the Second World War, to current efforts to build a large new nuclear fusion facility (ITER). Less positively, increasing restrictions on entry to certain countries, and in particular the United States after the 9/11 attacks in New York and elsewhere, have significantly impeded scientific exchange programmes. Here the challenge for diplomats was seen as helping to find ways to ease the burdens of such restrictions. The broadest gaps in understanding the potential of scientific diplomacy lay in the third category, namely the use of science as a channel of international diplomacy, either as a way of helping to forge consensus on contentious issues, or as a catalyst for peace in situations of conflict. On the first of these, some pointed to recent climate change negotiations, and in particular the work of the Intergovernmental Panel on Climate Change, as a good example, of the way that the scientific community can provide a strong rationale for joint international action. But others referred to the failure of the Copenhagen climate summit last December to come up with a meaningful agreement on action as a demonstration of the limitations of this way of thinking. It was argued that this failure had been partly due to a misplaced belief that scientific consensus would be sufficient to generate a commitment to collective action, without taking into account the political impact that scientific ideas would have. Another example that received considerable attention was the current construction of a synchrotron facility SESAME in Jordan, a project that is already is bringing together researchers in a range of scientific disciplines from various countries in the Middle East (including Israel, Egypt and Palestine, as well as both Greece and Turkey). The promoters of SESAME hope that – as with the building of CERN 60 years ago, and its operation as a research centre involving, for example, physicists from both Russia and the United States – SESAME will become a symbol of what regional collaboration can achieve. In that sense, it would become what one participant described as a “beacon of hope” for the region. But others cautioned that, however successful SESAME may turn out to be in purely scientific terms, its potential impact on the Middle East peace process should not be exaggerated. Political conflicts have deep roots that cannot easily be papered over, however open-minded scientists may be to professional colleagues coming from other political contexts. Indeed, there was even a warning that in the developing world, high profile scientific projects, particular those with explicit political backing, could end up doing damage by inadvertently favouring one social group over another. Scientists should be wary of having their prestige used in this way; those who did so could come over as patronising, appearing unaware of political realities. Similarly, those who hold science in esteem as a practice committed to promoting the causes of peace and development were reminded of the need to take into account how advances in science – whether nuclear physics or genetic technology – have also led to new types of weaponry. Nor did science automatically lead to the reduction of global inequalities. “Science for diplomacy” therefore ended up with a highly mixed review. The consensus seemed to be that science can prepare the ground for diplomatic initiatives – and benefit from diplomatic agreements – but cannot provide the solutions to either.

ISS: Extension—Science Diplomacy- No Link

Coop doesn’t solve science diplomacy

Oberg 06 (By James E. Oberg, writer and consultant in Houston. A 22-year veteran of NASA mission control, he is the author of numerous books on space, 6/27/06, Presentation at the Workshop on Space, Strategy, and China’s Future Air War College Center for Asian Strategic “The U.S. and China: What ‘Common Ground’ in Outer Space?”, Marshall Policy Outlook, http://www.marshall.org/pdf/materials/443.pdf)

Contemporary thinking on this theme Realism is a more challenging task than first it seems. A good example of modern mythology is a newspaper essay1 published last April 18 by Vincent Sabathier and G. Ryan Faith, space policy wonks at the Center for Strategic and International Studies in Washington, D.C. Engaging in a new “moon race” with China, they wrote, “can cause more harm than good— and putting national competition at the center of a return to the moon can repeat the errors of Apollo—the errors that ultimately resulted in a 35-year-long retreat from the lunar surface.” Essentially the authors are rewriting space history to argue that had the Apollo program been a genuine U.S.-Soviet cooperative venture, human lunar exploration would have continued unbroken for decades. The gap, in this view, was only caused by the “space race” attitude. But this is anti-historical, even fantastical. Apollo was funded at appropriate levels not because of Congressional curiosity about moon rocks, but out of a broad consensus that the superiority of U.S. advanced technology needed to be reasserted in the face of a Soviet challenge.2 The payoffs of Apollo’s success in doing exactly this goal (while revolutionizing planetary science on the side3) resonated to America’s benefit for decades by giving credibility to American know-how across-theboard— scientific, commercial, AND military. Some have argued that it was this Apollosprung credibility that made Reagan’s SDI the back-breaking, unavoidable challenge to the very existence of the Soviet state.4 The authors5 argue a second “lesson of the post-Apollo era,” to wit, “that international cooperation is essential to maintaining a spaceexploration program.” Experts may debate this point, but its relevance to a proposed partnership with China is obscure because, as is well known, the U.S. is already intimately involved in international partnerships with the space station. If China remains outside this team, it—not the rest of the current team members such as most of Europe including Russia, Japan, and Canada—would seem to be most vulnerable. Yet their main thesis is a classic non sequitur (an assertion that does not follow from previous arguments): “If the United States is serious about leadership in space exploration, inviting the Chinese Shenzhou to dock at the international space station is an excellent first step on this journey.”6 But the U.S. has already made steps, many steps in fact, in this direction, as the historical record shows, with mixed results. Other specialists bring up the perpetual promise of cost savings by sharing the load. John Logsdon, director of the Space Policy Institute of Washington University recently told newsmen that the “high cost of space exploration creates potential opportunities for cooperation among states.”7 But Logsdon, a genuine expert, knows better. The historical record shows that despite promises that mostly appeal to congressmen, major international joint programs almost invariably wind up costing more, taking longer, and delivering less than an alternative well-managed single-leader program. When faced with the same argument as support for inviting the Russians into the U.S.- led ‘Freedom’ space station project in 1993, experienced observers at the time were skeptical. “I have yet to see a joint international program that saves any money,” noted aerospace industry leader Norman Augustine.8 By June 1994, the Government Accounting Office had written: “Most of the savings from Russian participation comes from an optimistic schedule that may not hold up. If the schedule slips, any savings will quickly evaporate.”9 As time would tell, this outside advice was right on target, but at the time NASA and the Clinton White House refused to consider it—and now, a decade later, many want to rewrite history to show that such time and money savings actually occurred.10 Russian-provided hardware was years late in delivery, driving NASA’s own costs sky high while integration redesigns wasted billions in earlier design work. To reach the northerly orbit required for Russian access, the Space Shuttle was both overstressed (subjected to a significantly higher aerodynamic load during launch) and off-loaded (a performance penalty of about one third was made up for through flying dozens more shuttle missions, each costing half a billion dollars). For 5% of the monetary contribution, Russia wound up being granted 40% of the station’s facility services, while making billions of dollars in foreign sales of their space hardware and services.11 The Russian partnership did allow the ISS to remain manned during the years that the surviving shuttle fleet was grounded, but the actual benefit of this accomplishment, of keeping a skeleton crew (with few scientific tasks) on board a largely unfinished orbital outpost, is debatable. They mostly repaired equipment that their own presence was wearing out, while restocking supplies that their own presence was using up. Without the Russian partnership and the Soyuz transportation system, a shuttle disaster would have led NASA to evacuate the station (using an emergency capsule that was designed prior to the Russian arrival, but later cancelled), leaving it safely on autopilot until shuttle flights could have resumed.

ISS: Extension—Science Diplomacy- No impact

Science diplomacy fails – political motivates corrupt its effectiveness.

Dickson 09 [David Dickson, director of SciDev.net, “The Limits of Science Diplomacy”, June 4, 2009, http://www.scidev.net/en/editorials/the-limits-of-science-diplomacy.html ]

But — as emerged from a meeting entitled New Frontiers in Science Diplomacy, held in London this week (1–2 June) — using science for diplomatic purposes is not as straightforward as it seems. Some scientific collaboration clearly demonstrates what countries can achieve by working together. For example, a new synchrotron under construction in Jordan is rapidly becoming a symbol of the potential for teamwork in the Middle East. But whether scientific cooperation can become a precursor for political collaboration is less evident. For example, despite hopes that the Middle East synchrotron would help bring peace to the region, several countries have been reluctant to support it until the Palestine problem is resolved. Indeed, one speaker at the London meeting (organised by the UK's Royal Society and the American Association for the Advancement of Science) even suggested that the changes scientific innovations bring inevitably lead to turbulence and upheaval. In such a context, viewing science as a driver for peace may be wishful thinking. Conflicting ethos Perhaps the most contentious area discussed at the meeting was how science diplomacy can frame developed countries' efforts to help build scientific capacity in the developing world. There is little to quarrel with in collaborative efforts that are put forward with a genuine desire for partnership. Indeed, partnership — whether between individuals, institutions or countries — is the new buzzword in the "science for development" community. But true partnership requires transparent relations between partners who are prepared to meet as equals. And that goes against diplomats' implicit role: to promote and defend their own countries' interests. John Beddington, the British government's chief scientific adviser, may have been a bit harsh when he told the meeting that a diplomat is someone who is "sent abroad to lie for his country". But he touched a raw nerve. Worlds apart yet co-dependent The truth is that science and politics make an uneasy alliance. Both need the other. Politicians need science to achieve their goals, whether social, economic or — unfortunately — military; scientists need political support to fund their research. But they also occupy different universes. Politics is, at root, about exercising power by one means or another. Science is — or should be — about pursuing robust knowledge that can be put to useful purposes. A strategy for promoting science diplomacy that respects these differences deserves support. Particularly so if it focuses on ways to leverage political and financial backing for science's more humanitarian goals, such as tackling climate change or reducing world poverty. But a commitment to science diplomacy that ignores the differences — acting for example as if science can substitute politics (or perhaps more worryingly, vice versa), is dangerous.

****Science diplomacy has limited effectiveness-the Middle East proves****

**Dickson 09** [David Dickson, director of SciDev.net, “The Limits of Science Diplomacy”, June 4, 2009]

**Only so much science can do**Recently, the Obama administration has given this field a new push, in its desire to pursue "soft diplomacy" in regions such as the Middle East. Scientific agreements have been at the forefront of the administration's activities in countries such as Iraq and Pakistan.
But — as emerged from a meeting entitled New Frontiers in Science Diplomacy, held in London this week (1–2 June) — using science for diplomatic purposes is not as straightforward as it seems.
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Solvency Frontline 1NC

1. The Soyuz is safer than the Shuttle ever was

Mulroy 6-16-11 James Mulroy is an undergraduate in aerospace engineering and has a lot of experience in research and literature review in composites and rocketry. He also writes articles in PC World. “The Shuttle Program is Winding Down. What Next?”

NASA recently signed a deal with Russia for $753 million to provide NASA with 12 round trips to the International Space Station at a cost of about $62.7 million per seat. This signals an 8.5% increase; however, statistically speaking, the Soyuz spacecraft is one of the safest spacecrafts ever created, and is safer than NASA's Space Shuttle. Additionally, according to the Aerospace Corporation, the CIS (Commonwealth of Independent States)/USSR has carried our more space-bound launches (manned and unmanned) than all other countries combined, at some 1300 successful launches MORE than the US's approximately <1200. NASA is also contracting with SpaceX, founded by PayPal co-founder Elon Musk, to fly supply missions to the International Space Station on NASA's behalf, from after the Space Shuttle program ends through December 2016. This deal is worth up to $3.1 billion, depending on the number of missions flown. However, until NASA either comes up with their own alternative or US private corporations take over, then Russia will be the main means for the US to send persons into space for some time to come.

1. Private space companies succeed – government programs get bogged down in bureaucracy

Simberg 7-19-11 Rand Simberg is an adjunct scholar at the Competitive Enterprise Institute, is an aerospace engineer and a consultant in space commercialization. “How Congress sabotages Space Exploration”

Fortunately, while they can slow down American enterprise, they can’t stop it (unless they make it illegal for private entities to go into space). SpaceX, United Launch Alliance, Boeing, Sierra Nevada, Bigelow Aerospace and others are going to continue to move forward and some time, probably within the next year (particularly if SpaceX docks a Dragon capsule with the ISS later this year, as currently planned), will be looking better and better. In fact, in an authorization committee hearing last week with administrator Bolden, even some of the committee members are starting to understand the implications of their disastrous policy preferences: “We’re still talking late this decade, early ’20s before we have a human-rated [SLS] vehicle,” [Bolden] said. That, a member of the committee later noted, makes it unlikely the MPCV would be able to serve as the backup for commercial providers for accessing the ISS unless the station’s life is extended beyond 2020. As the commercial providers continue to meet critical milestones at modest costs, and the government rocket program continues to be bogged down in mismanagement and bureaucracy, just as Constellation was, it will become clear to everyone else in Congress that we cannot afford to continue to do space business as usual as the nation becomes more and more fiscally strapped. As not just the Shuttle era, but the government-directed human spaceflight era ends, we’re finally going to get a space program that looks like America, whether the defenders of the status quo like it or not.

1. Shuttles aren’t worth it—trades off with more important tech

Air & Space Magazine’10**,** Air & Space Smithsonian Magazine, 2010. Interview withFormer astronaut Story Musgrave, veteran of six space shuttle flights on five different orbiters, seven academic degrees, including a doctorate in medicine, worked as a part-time trauma surgeon for NASA.“A&S Interview: Story Musgrave”

http://www.airspacemag.com/space-exploration/AS-Interview-Story-Musgrave.html

A&S: Do you think the space shuttle program was worth the money spent on it? Musgrave: No, it was not worth the money—it ended up being a billion [dollars] a flight. And people might question my accounting: My accounting is to look at the Congressional budget that says how much money goes to the shuttle, and divide that by the number of flights. That kind of accounting is hard to argue with, and so it was a billion a flight, which is a massive amount. The whole thing is very complicated. I would have joined the robotic programs and the human programs instead of having them separate into either/or. People always used to try to get [Carl] Sagan on one side of the fence and me on the other, and have a little debate. Well, when the moderator talked to us, he found out I was on Sagan’s side. We need to join the robotic and the human programs so that they optimize each other. Send robots first to mine the materials you need, and they build the habitats. And then humans can get low-cost reliable access to space. All in all, I do have to give American engineering unbelievable credit that they were able to pull off this thing, as difficult as it was. [The shuttle] ended up having the best possible team in the world to make the most of it. But they’re not able to do anything with cost, of course. So the question is: Was it worth it? No, it was not worth it. But this is hindsight, you see. *A&S*: From a financial standpoint, not worth it? Musgrave: Well, I’m looking at what we could have done for the same money. The cost of the space station is 300 Voyager-class satellites. I could have a dozen or more satellites, Voyager-class, on every planet, and on every moon of every planet. I could have had satellites transmitting high-resolution, multimedia data back from 30 different bodies out there in the solar system. I could have the space station up there doing another truss, another module, another connection, another resupply--that’s what it is to the public. Or I could have had 30 simultaneous transmissions covering the entire solar system. Now that’s what people need to understand we gave up.

Politics Link- Plan Popular 1NC

The space program has immense Republican support

Wilson 7-21-11 Reid Wilson is editor-in-chief of National Journal Hotline. “We Love the Final Frontier”.

Why are conservative Republicans, who love nothing more than trimming government as far as they can, bent on perpetuating NASA’s human spaceflight program? Along with powerful appropriators and well-placed veteran members of Congress, tea party freshmen are concluding that sending humans into space is a valuable use of the country’s limited resources. That view is at odds with many in the scientific community, who believe that repeatedly sending astronauts to low-Earth orbit is a waste of time and resources. “We haven’t learned one thing from the space station, not an iota,” Bob Park, a former head of the University of Maryland’s Physics Department told me. “There is nothing that a human being can do in space at this point that we can’t do far better, cheaper, safer, more reliably—all of these things—than robots.” But human spaceflight has powerful allies, thanks to both the aerospace contractors who stand to make billions off future endeavors and the members of Congress who realize just how many jobs will be lost if manned flight is permanently shelved. Tens of thousands of jobs are on the line in Alabama, California, Florida, and Texas alone, with NASA itself and in dependent industries. Freshmen such as Reps. Sandy Adams, R-Fla., and Mo Brooks, R-Ala., represent districts that will be hit the hardest. “It’s about jobs, but it’s not just about the jobs in my community,” Adams said in an interview. “It’s jobs throughout the nation that have been spinoffs from what has been gleaned from that research and technology and that innovation.” It’s also about connections. Sen. Bill Nelson, D-Fla., is a former astronaut and has pushed his colleagues to keep funding human spaceflight. Sen. Richard Shelby, R-Ala., is a staunch defender of an aerospace industry that has a heavy footprint in the northern part of his state. Sens. Dianne Feinstein and Barbara Boxer, both D-Calif.; Kay Bailey Hutchison and John Cornyn, both R-Texas; and Orrin Hatch, R-Utah, are aggressively defending money set aside for contractors in their home states. On the House side, a cadre of influential Republicans, led by Rep. Frank Wolf of Virginia, is looking out for NASA’s interests as well. “We have a responsibility to firewall and protect these core, essential functions of the federal government in an era of austerity that’s unlike anything we’ve ever confronted before,” said Rep.John Culberson, R-Texas, a fiscal hawk who nonetheless defends spending billions on a human spaceflight program. “We need to make sure NASA knows we love them and we’re behind them 110 percent.” Unlike government studies that can be easily mocked, or programs that duplicate one another, there is a romantic allure to human spaceflight that has proven a valuable ally to the space caucus. Members of Congress and NASA scientists can play off that romance with a public that still flocks toStar Trek and Star Wars movies, as well as the very large proportion of taxpayers who remember where they were when Neil Armstrong walked on the moon. The dichotomy of a program that provides little immediate value but enjoys plenty of societal goodwill, not to mention powerful backers on Capitol Hill, puts the Obama administration in a difficult position. Although President Obama’s science team clearly wants to take any future space exploration in a new direction, senior officials cannot be too overt in opposing money directed at key states. One need only look to Charles Bolden, Obama’s NASA administrator, for the White House’s official line. “The Obama administration remains committed to human exploration,” Bolden told me. “America will continue to lead in human exploration and human spaceflight.” The trouble is, no one knows exactly what NASA’s next steps are. The space-shuttle program officially ends on Thursday morning, when Atlantis is scheduled to return to the Kennedy Space Center after a final mission to the International Space Station. The program that was to replace the shuttles, Constellation, was so far over budget and behind schedule that the administration decided to scrap it and come up with a new plan, largely based on the nascent commercial industry. But unlike other government programs that have met untimely ends at the hands of budget choppers, human spaceflight seems to have risen from the ashes. Separate earmarks in the House and Senate have set aside an additional $3 billion for the construction of a new heavy-lift rocket and capsule for human passengers. There is some debate over how long a return to space may take. Bolden said that the industry consensus is that the first missions can lift off about three years after the government signs a deal with a private contractor and that the U.S. could send people into space aboard an American vehicle as early as 2014. When it departed the International Space Station for a final time, the crew of Atlantis left behind a U.S. flag that flew on the very first shuttle mission three decades ago. It will remain at the station, symbolically, until the next time a NASA vehicle arrives there. Thanks to the powerful duo of robust Hill lobbying and a collective national veneration for spaceflight, that day will come despite the torrid budget-cutting and even though many scientists say it’s not worth the money.

Politics Link- Plan Popular 2NC

Space shuttle cancellation was unpopular – poll proves

IBD 7-20-11 Investors Business Daily “Majority Opposes Shuttle Shutdown”

When the space shuttle Atlantis lands Thursday, the U.S. will be without a way to get into space for the first time since Dwight Eisenhower was president. And Americans are unhappy about that, according to a new IBD/TIPP Poll. The poll, which asked several questions about America's role in space exploration, found that 56% oppose ending the space shuttle program. That sentiment was shared almost equally among Democrats, Republicans and Independents.

Politics Link- Plan Unpopular 1NC

Congress opposes manned spaceflight

Handberg 7-25-11 Roger Handberg is Professor and Chair of the Department of Political Science at the University of Central Florida. “The beginning of the end or the end of the beginning?”

The Space Shuttle era ended when Atlantis lifted off for the International Space Station (ISS); its return to Earth last week was anticlimactic. What that means is that the US civil crewed space program has moved from a nonpartisan icon to just another toy in the political dustup on Capitol Hill. Any future US civil manned space program will confront the open hostility of elements within the American electorate and in Congress. The national mantra now is deficit reduction, which will largely be extracted from the discretionary component of the federal budget. In the scramble to survive, NASA and its programs are among the weakest, politically speaking. Its interest groups are small and crosscut by conflicting interests and agendas. How the United States got to this point is a multi-administration tale that need not detain us unduly. The important point is to delineate what the world looks like for any successor US space program.

Politics Link- Plan Unpopular 2NC

Bipartisan opposition to NASA programs – they’re expensive, weakly supported, and lack direction

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All of this occurs against the background of an increasingly partisan congressional war over the federal government budget deficit, the federal debt ceiling, and the Obama healthcare plan that Republicans basically want to repeal. NASA is threatened by the first two disputes because the deficit reduction debate focuses mostly on discretionary spending where NASA represents a fairly large target with relatively weak support from a national constituency. Whether the first two issues can be resolved definitively this year remains an unknown (at the time of this writing in mid-July 2011) but if the debate over deficit reduction is real and entitlements (Social Security and Medicare/Medicaid) and defense spending are held harmless or largely protected from significant cuts, NASA’s problems make it an optimal target for severe budget reductions. Such reductions could render the entire debate over shuttle replacement a moot point; the private option would be the only game in town for the US. Except for legislators located immediately around NASA facilities, there is likely to be severe erosion of congressional support for NASA’s budget when measured against other national priorities. That “vision thing” (the deficiency attributed to President George H.W. Bush) has been a long-standing problem in the US space program. Future directions have largely been destination driven (the Space Exploration Initiative and the Vision for Space Exploration, or the various space science missions in the solar system), an outgrowth of the concern with space “firsts” which characterized the early space race. Now, though, most of the obvious locations have been visited at least by robotic missions, so there is nothing under the sun that is completely new except for sending humans down the same trail. The problem is that there is no political will to drive such missions with their large and likely to escalate costs. The American political process at its best has difficulty with long-term government programs when the same program is revisited each fiscal year for the next budget allocation. With partisan animosity growing, NASA is being sucked into the whirlpool of congressional and presidential politics. The reality is that nothing of major significance is likely to happen until after the 2012 presidential and congressional elections. Apollo was a pure and shining moment in US space history when there was national unity on the question of future directions for the US manned space program. That unity proved short-lived as budget issues arose in subsequent years but the differences were never so politically partisan as to endanger future directions for NASA. NASA was clearly supported for idealistic and very mundane political reasons: the Apollo program was a giant technological enterprise whose bounty was spread across numerous states and congressional districts, a technological TVA for the South. Now, in the absence of a viable national space objective, the process is reduced to partisan bickering and self-serving short-term choices. Slowly, the nonpartisan aura of the US human space program is dissipating, leaving a mix of bad feelings and distrust on all sides. How much damage will be done, no one knows.

Economic climate means congress doesn’t want to spend money on the shuttle program

*Powell 2009*

(Stewart M. Powell, Washington Bureau – Houston Chronicle, "Potential Uphill Battle for NASA," 2009 pg online @ www.chron.com/disp/story.mpl/nation/6615751.html//arjun)

 WASHINGTON — NASA supporters are bracing for an uphill battle to get the extra funding needed to take on missions more ambitious than visits to the international space station. A high-level panel told President Barack Obama last week that the space program needs an infusion of about $3 billion more a year by 2014. That may be a tough sell, even though the amount could be considered spare change in a fast-spending capital where the White House and Congress are on track to dole out nearly $4 trillion this year to finance federal operations, including bailouts for Wall Street firms, banks and automakers. “The congressional agenda over the next year is going to be focused on cutting programs, not adding to them,” said Scott Lilly, a scholar at the Center for American Progress. Adding resources to the nation's $18.7 billion-a-year space program would require cuts in other areas, said Lilly, who doesn't think lawmakers are willing to make those trades. Rep. Pete Olson, R-Sugar Land, the ranking Republican on the House subcommittee that has jurisdiction over NASA, said wrangling the additional $3 billion a year would be “an enormous challenge — but one I am prepared to win.” Added Olson, whose district includes Johnson Space Center: “NASA doesn't require bailout funds — it needs the promised level of investment that previous Congresses have endorsed.” The 10-member panel of space experts led by retired aerospace executive Norman Augustine suggested extending U.S. participation in the $100 billion space station for five years, extending budgeting for the retiring shuttle fleet by six months, delaying plans for a 2020 return to the moon and extending the timeline for the next generation of manned spacecraft by two years at least until 2017. But the experts warned in their 12-page preliminary report to Obama on Tuesday that “meaningful human exploration” would be possible only under “a less constrained budget ramping (up) to approximately $3 billion per year” in additional spending by 2014. Former astronaut Sally Ride, a member of the committee, forecast $27.1 billion in additional funds would be needed over the next decade — a 27 percent increase over the $99.1 billion currently planned. Even before Obama publicly reacts to Augustine's report to map the next steps in the nation's manned space exploration, members of Congress are scrambling. “The immediate challenge goes beyond money to just getting NASA on the radar screen when everyone is focused on health care reform,” said a key congressional staffer involved in NASA issues. Finding support NASA supporters initially are targeting the Democratic leadership of appropriations subcommittees in the House and Senate with jurisdiction over NASA. Space advocates have an ally in Sen. Barbara Mikulski, D-Md., chairwoman of the Senate Appropriations Committee panel that handles space agency spending. But in the House, pro-NASA lawmakers expect a fight with Rep. Alan Mollohan, D-W.Va., chairman of the House Appropriations Committee panel that cut next year's NASA spending nearly $500 million below what Obama requested. Lawmakers are looking for a House-Senate conference committee to restore the funds that Mollohan cut before the Augustine panel completed its work. Aides to Sen. Bill Nelson, D-Fla., chairman of a Senate subcommittee that oversees NASA, said they have already identified six potential sources of additional NASA funding within the federal budget, including some of the $8 billion promised over the next decade to private energy firms to research fossil fuels and deep drilling for oil and gas. Lawmakers also are exploring the possibility of redirecting some of the two-year, $787 billion economic stimulus package from shovel-ready transportation construction projects and other federally subsidized programs into the NASA budget. The administration so far has only paid out $160 billion of the total, according to Vice President Joe Biden. “A lot of stimulus money has not been spent,” said Sen. John Cornyn, R-San Antonio. “We should redirect some of those stimulus funds to pay for enhancements to the NASA budget because I believe human space flight is so important.” Aerospace executives and veteran space experts are hoping for reliable year-to-year funding. “These are challenging economic times, but this is not the moment to turn away from leading a global space exploration effort,” said Dean Acosta, head of the Houston-based Coalition for Space Exploration. President's influence Presidential leadership will be essential to gaining an increase, emphasized John Logsdon, a space policy expert who served on the Shuttle Columbia.

The human spaceflight program has no political support

Thompson 11

(Loren Thompson, Loren B. Thompson is Chief Operating Officer of the non-profit Lexington Institute and Chief Executive Officer of Source Associates, a for-profit consultancy. Prior to holding his present positions, he was Deputy Director of the Security Studies Program at Georgetown University and taught graduate-level courses in strategy, technology and media affairs at Georgetown. He has also taught at Harvard University's Kennedy School of Government, "Human Spaceflight," April 2011 pg online @ www.lexingtoninstitute.org/library/resources/documents/Defense/HumanSpaceflight-Mars.pdf//arjun)

 NASA’s human spaceflight program has been gradually losing ground since the Challenger disaster 25 years ago. Retirement of the Space Shuttle fleet and cancellation of the Bush Administration’s Constellation program signal an uncertain future for one of the most important scientific initiatives in human history. Although Congress and the Obama Administration have cobbled together a framework for proceeding with future missions, human spaceflight today lacks a core mission or rationale that can sustain political support during a period of severe fiscal stress.

Debt Ceiling Link—Spending 2NC

Republicans are on board debt ceiling raise due to budget cuts – spending would devastate support

Bryan **Yurcan**. Journalist @ Christian Post.“House to Vote on Spending Bill in Debt Row.” July 19, 20**11**. http://www.christianpost.com/news/house-to-vote-on-tea-party-inspired-spending-bill-52497/>] AC

The House of Representatives is set today to vote on a spending plan that would raise the debt ceiling another $2.4 trillion but also require deep and immediate spending cuts. Republican Leaders will present the “cut, cap, and balance” plan, which would allow the federal government to borrow an additional $2.4 trillion to pay its debts, in exchange for $111 billion in spending cuts in the upcoming budget year,which begins Oct. 1.The deal will also require another $6 trillion in cuts over the coming decade, proponents of the bill have said.

Plan costs exceed projected costs—it’s worth millions per flight

**Tech Review 7/6**, Published by MIT, July 6, 2011. “Was the space shuttle a mistake?”

http://www.google.com/url?sa=t&source=web&cd=4&sqi=2&ved=0CCoQFjAD&url=http%3A%2F%2Fwww.technologyreview.com%2Fprinter\_friendly\_article.aspx%3Fid%3D37981&ei=La4wTrH\_JuX20gGPn9SFAw&usg=AFQjCNFYUPgHEm730i-fYBGr-kkh\_6klHw&sig2=NMSSM6pKOasqvXC0gyqMxw

But were these considerable benefits worth the $209.1 billion (in 2010 dollars) that the program cost? I doubt it. **The shuttle was much more expensive than anyone anticipated at its inception**. Then-NASA administrator James Fletcher told Congress in 1972 that **the shuttle would cost $5.15 billion to develop and could be operated at a cost of $10.5 million per flight**. NASA only slightly overran development costs, which is normal for a challenging technological effort, but **the cost of operating the shuttle turned out to be at least 20 times higher than was projected at the program's start**. The original assumption was that the lifetime of the shuttle would be between 10 and 15 years. By operating the system for 30 years, with its **high costs** and high risk, rather than replacing it with a less expensive, less risky second-generation system, NASA compounded the original mistake of developing the most ambitious version of the vehicle. **The shuttle's cost has been an obstacle to NASA starting other major projects**.

**Prefer our link—it reflects a trend of hating spending on space—this was the reason we ended our shuttle program the first time**

Spending DA Link 1NC

Actual costs exceeded projected costs—it’s worth millions per flight

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http://www.google.com/url?sa=t&source=web&cd=4&sqi=2&ved=0CCoQFjAD&url=http%3A%2F%2Fwww.technologyreview.com%2Fprinter\_friendly\_article.aspx%3Fid%3D37981&ei=La4wTrH\_JuX20gGPn9SFAw&usg=AFQjCNFYUPgHEm730i-fYBGr-kkh\_6klHw&sig2=NMSSM6pKOasqvXC0gyqMxw

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Spending DA Link- 2NC

## **Congress doesn’t want to increase spending for the space program—it’s too expensive**

**Powell 2009**

(Stewart M. Powell, Washington Bureau – Houston Chronicle, "Potential Uphill Battle for NASA," 2009 pg online @ www.chron.com/disp/story.mpl/nation/6615751.html//arjun)

 WASHINGTON — NASA supporters are bracing for an uphill battle to get the extra funding needed to take on missions more ambitious than visits to the international space station. A high-level panel told President Barack Obama last week that the space program needs an infusion of about $3 billion more a year by 2014. That may be a tough sell, even though the amount could be considered spare change in a fast-spending capital where the White House and Congress are on track to dole out nearly $4 trillion this year to finance federal operations, including bailouts for Wall Street firms, banks and automakers. “The congressional agenda over the next year is going to be focused on cutting programs, not adding to them,” said Scott Lilly, a scholar at the Center for American Progress. Adding resources to the nation's $18.7 billion-a-year space program would require cuts in other areas, said Lilly, who doesn't think lawmakers are willing to make those trades. Rep. Pete Olson, R-Sugar Land, the ranking Republican on the House subcommittee that has jurisdiction over NASA, said wrangling the additional $3 billion a year would be “an enormous challenge — but one I am prepared to win.” Added Olson, whose district includes Johnson Space Center: “NASA doesn't require bailout funds — it needs the promised level of investment that previous Congresses have endorsed.” The 10-member panel of space experts led by retired aerospace executive Norman Augustine suggested extending U.S. participation in the $100 billion space station for five years, extending budgeting for the retiring shuttle fleet by six months, delaying plans for a 2020 return to the moon and extending the timeline for the next generation of manned spacecraft by two years at least until 2017. But the experts warned in their 12-page preliminary report to Obama on Tuesday that “meaningful human exploration” would be possible only under “a less constrained budget ramping (up) to approximately $3 billion per year” in additional spending by 2014. Former astronaut Sally Ride, a member of the committee, forecast $27.1 billion in additional funds would be needed over the next decade — a 27 percent increase over the $99.1 billion currently planned. Even before Obama publicly reacts to Augustine's report to map the next steps in the nation's manned space exploration, members of Congress are scrambling. “The immediate challenge goes beyond money to just getting NASA on the radar screen when everyone is focused on health care reform,” said a key congressional staffer involved in NASA issues. Finding support NASA supporters initially are targeting the Democratic leadership of appropriations subcommittees in the House and Senate with jurisdiction over NASA. Space advocates have an ally in Sen. Barbara Mikulski, D-Md., chairwoman of the Senate Appropriations Committee panel that handles space agency spending. But in the House, pro-NASA lawmakers expect a fight with Rep. Alan Mollohan, D-W.Va., chairman of the House Appropriations Committee panel that cut next year's NASA spending nearly $500 million below what Obama requested. Lawmakers are looking for a House-Senate conference committee to restore the funds that Mollohan cut before the Augustine panel completed its work. Aides to Sen. Bill Nelson, D-Fla., chairman of a Senate subcommittee that oversees NASA, said they have already identified six potential sources of additional NASA funding within the federal budget, including some of the $8 billion promised over the next decade to private energy firms to research fossil fuels and deep drilling for oil and gas. Lawmakers also are exploring the possibility of redirecting some of the two-year, $787 billion economic stimulus package from shovel-ready transportation construction projects and other federally subsidized programs into the NASA budget. The administration so far has only paid out $160 billion of the total, according to Vice President Joe Biden. “A lot of stimulus money has not been spent,” said Sen. John Cornyn, R-San Antonio. “We should redirect some of those stimulus funds to pay for enhancements to the NASA budget because I believe human space flight is so important.” Aerospace executives and veteran space experts are hoping for reliable year-to-year funding. “These are challenging economic times, but this is not the moment to turn away from leading a global space exploration effort,” said Dean Acosta, head of the Houston-based Coalition for Space Exploration. President's influence Presidential leadership will be essential to gaining an increase, emphasized John Logsdon, a space policy expert who served on the Shuttle Columbia

The shuttle is really expensive

**Easterbrook 5**, Gregg Easterbrook, writer for Time, July 28, 2005.

http://www.time.com/time/magazine/article/0,9171,1004201,00.html

A spacecraft is a metaphor of national inspiration: majestic, technologically advanced, produced at dear cost and entrusted with precious cargo, rising above the constraints of the earth. The spacecraft carries our secret hope that there is something better out there--a world where we may someday go and leave the sorrows of the past behind. The spacecraft rises toward the heavens exactly as, in our finest moments as a nation, our hearts have risen toward justice and principle. And when, for no clear reason, the vessel crumbles, as it did in 1986 with Challenger and last week with Columbia, we falsely think the promise of America goes with it. Unfortunately, the core problem that lay at the heart of the Challenger tragedy applies to the Columbia tragedy as well. That core problem is the space shuttle itself. For 20 years, the American space program has been wedded to a space-shuttle system that is **too expensive**, too risky, too big for most of the ways it is used, with budgets that suck up funds that could be invested in a modern system that would make space flight cheaper and safer. The space shuttle is impressive in technical terms, but in financial terms and safety terms no project has done more harm to space exploration. With hundreds of launches to date, the American and Russian manned space programs have suffered just three fatal losses in flight--and two were space-shuttle calamities. This simply must be the end of the program