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## Uniqueness Helpers – Space exploration declining now

### **US SPACE EXPLORATION IS ON THE DECLINE – BUDGET AND PUBLIC INTEREST**

LYFORD 11 (Rebecca, graduate student from the University of Phoenix. The Declining Interest in Space Exploration Leads to Loss of Valuable Pieces of History, April 29 2011, bloglogo, <http://upcomingtrends.info/the-declining-interest-in-space-exploration-leads-to-loss-of-valuable-pieces-of-history/23625/>) theo

Tragically that could not be farther from the truth. The interest in space exploration has seen a steady declined since the Apollo missions. The once massive NASA budget of 25 to 34 billion dollars as dwindled down to approximately 15 billion dollars. The nail-biting excitement of the mid to late sixties no longer exists today. Of the 135 moon rocks that were distributed, only approximately a dozen have known whereabouts (CollectSPACE, 2009). Most have been lost or stolen over the years with the exception of a few high profile cases. In 1998, a senior special agent with NASA’s Office of Inspector General, Joseph Gutheinz Jr., led an undercover operation with the hope of locating some of the missing moon rocks (Geotimes, 2004). Senior special agent Gutheinz operated a bogus estate sale company title John’s Estate Sale and place an add in the USA Today entitled “Moon Rocks Wanted” with the hopes that someone who was illegally in possession of one of the rocks would contact him. Sure enough, Senior special agent Gutheinz was contacted by a seller who want million dollars for the moon rock. After a lengthy investigation into the authenticity of the moon rock, Senior special agent Gutheinz was able to seize the moon rock on behalf of the United States (Geotimes, 2004). On February 28, 2004, the Honduran moon rock was presented to its rightful owner, Honduran President Ricardo Maduro (Geotimes, 2004).

### US SPACE EXPLORATION COMING TO AN END—ISS AND SHUTTLE RETIREMENT

ECKMAN 11 (Dr. Jim, President of Grace University in Omaha and is Professor of History, Theology, and Ethics, The Space Shuttle Program: A Metaphor For America, Issues in Perspective, July 23 2011, <http://graceuniversity.edu/iip/2011/07/11-07-23-1/>) theo

On 8 July 2011, the US space shuttle program came to an end. The shuttle Atlantis was the last operational shuttle to be launched into space; its mission was to resupply the International Space Station (ISS). The space shuttle program lasted for 30 years and involved 135 launches and two tragic disasters (the 1986 Challenger disintegration in mid-air shortly after lift-off and the 2003 Columbia disaster, which broke apart over Texas during re-entry). Atlantis will now join Endeavor, Discovery and the prototype Enterprise (after the TV series Star Trek) in various museums across the nation. As a result of the shuttle’s end, billions of dollars in the US budget will be saved, albeit with a loss of a significant number of jobs along Florida’s “Space Coast”, along with others in Houston and other parts of the country. Now the ISS will rely on Russian, European and Japanese rockets for its supplies, and as The Economist laments, “the nation that won the space race by putting Neil Armstrong’s footprint on the moon with Apollo 11, will be without the ability to send astronauts into space. Any that do [go into space] will [need to] rent seats on the Russian rockets.” What does all this mean for America? Is it a symbol for America’s decline or is it not that significant? Several thoughts.

## SKFTA – Yes

### SKFTA will pass now – Camp pushing

Palmer, 7/27. (Scott reports for Reuters. July 27, 2011. “Lawmaker presses Obama to back trade deals plan,” [http://www.reuters.com/article/2011/07/27/us-usa-trade-deals-idUSTRE76K0HH20110727](http://www.reuters.com/article/2011/07/27/us-usa-trade-deals-idUSTRE76K0HH20110727m), CALLAHAN)

Representative Dave Camp, who chairs the House of Representatives Ways and Means Committee, urged President Barack Obama to back the step-by-step plan. It is intended to assure Democrats that the Trade Adjustment Assistance (TAA) program for workers displaced by international trade would not be killed during action on the South Korea, Colombia and Panama deals. "I think now we have set out a framework that is reasonable, that will ensure that TAA is done and that the agreements are voted on," Camp told reporters after a speech to the U.S. Chamber of Commerce. "I'm hopeful that now that we have this path forward, (the White House) will sign on to it," Camp said. But both a Senate Democratic aide and an Obama administration official said there still was no final agreement on the sequence for voting on TAA and the trade pacts in the Republican-led House and the Democratic-led Senate. Democrats view TAA as a vital part of the U.S. social safety net, while many Republicans -- especially those elected last year on promises to cut government spending -- question its effectiveness and cost. "There have certainly been productive conversations with the leadership in both houses on a path to pass this job-creating trade package and ensure U.S. workers have the opportunities and training they need, but so far, there is not an agreement on a path forward," the Senate aide said.

### Republicans supporting TAA now – no obstacles to passage

Farm Futures, 7/26. (Compiled by magazine staff writers. July 26, 2011, “FTA Supporters See Passage on the Horizon,” http://farmfutures.com/story.aspx/fta-supporters-see-passage-on-the-horizon-17-51534, CALLAHAN)

President Obama and Congressional Republicans have disagreed over Trade Adjustment Assistance, a program that would help workers negatively affected by passage of the pending free trade agreements with Colombia, Panama and South Korea. The Administration has insisted that the program be reinstated before sending the trade deals to Congress. Senators Roy Blunt, R-Mo., and Rob Portman, R-Ohio, have produced a letter with names of Republican Senators committed to voting to kill a filibuster of that legislation. The free trade agreements have been stalled due to Obama's request that TAA be attached to one of the deals. Blunt and Portman believe they have created a compromise acceptable to both parties to clear TAA as a stand-alone bill and guarantee enough votes to kill a filibuster. The dozen Senators that signed on to the letter committing to support the legislation provides more than enough votes to ensure passage of the reformed TAA, which reflects the bipartisan reform brokered by Senate Finance Committee Chairman Max Baucus, D-Mont., and House Ways and Means Committee Chairman Dave Camp, R-Mich. The White House is still concerned the Senate's TAA legislation might be amended in a way that could kill the bill. "Together with my colleagues in the House and the Senate, I've been working to find a path forward for these job-producing agreements with our allies in Panama, Colombia, and South Korea for the last five years. Today we have that path forward," said Blunt. "I'm pleased that so many of my Senate colleagues have recognized the importance of this moment and joined us in this effort to demonstrate our commitment to working together to get all three deals passed as soon as possible." House Speaker John Boehner, R-Ohio, and Representative Camp have told the Administration their plan is to proceed similarly to the Senate, with TAA on its own. The U.S. Chamber of Commerce Vice President of International Affairs John Murphy says they are organizing a House-side door knock to visit as many offices as possible. Murphy says a deal hasn't been reached on a clear path forward, but it's clear they are making progress. "Our country is in a fiscal crisis and export promotion is one of the few budget-neutral tools available to help spur job growth," said Portman. "That's why advancing job creating agreements with Korea, Colombia and Panama that expand exports is so urgent and timely. If we aren't moving forward in the global economy, we're falling behind. It's time for the President to submit these agreements. We can pass TAA and these export agreements in separate votes, and we can get them passed now." Colombia, Panama and South Korea FTA supporters, including those in agriculture, hope Congress will pass the agreements before summer recess.

### SKFTA will pass – Clinton pushing

Washington Times, 7/12. (Ben Birnbaum reports for the Washington Times. July 12, 2011, “Clinton urges Congress to approve trade deals soon,” http://www.washingtontimes.com/news/2011/jul/12/clinton-tells-congress-pass-trade-deals-soon/, CALLAHAN)

Secretary of State Hillary Rodham Clinton on Tuesday urged Congress to pass three stalled trade deals before its summer recess, calling the agreements vital to U.S. economic and strategic interests. “I know two things about trade: It is a polarizing political issue, but done right, it creates American jobs,” Mrs. Clinton said at a conference of the U.S. Global Leadership Coalition. President George W. Bush signed free trade agreements with Colombia, Panama and South Korea, but the deals have languished in Congress amid concerns that they could cost U.S. jobs. Mrs. Clinton, who herself called for a “time-out on trade” as a presidential candidate in 2007, rejected such concerns. “While our economic competitors are signing bilateral trade deals with countries in Africa, Latin America and Asia, the three trade deals now working their way through Congress have the potential to create tens of thousands of new American jobs,” she said. Mrs. Clinton cited projections that the U.S.-Korea trade deal would grow the American economy by more than $10 billion a year. She also said the trade deal with Colombia would allow U.S. products to enter the Latin American country duty free, as Colombian products have done in the U.S. for years. Most U.S. goods also would enter Panama duty free instead of facing tariffs as high as 81 percent, she added. “Passing these deals is critical to our economic recovery,” Mrs. Clinton said. “But the stakes are not just economic. These nations are three important partners in strategically vital areas. Countries everywhere are watching to see whether America will deliver for our friends and allies.” U.S. Trade Representative Ron Kirk said in a speech Tuesday that he is confident Congress will approve the pacts by August, though he said the White House is still coordinating with congressional leaders on the timing of the votes. “We need to pass these agreements and put them in place,” Mr. Kirk said. “We’re ready to go now.” The Obama administration wants the deals to be tied to the passage of Trade Adjustment Assistance (TAA), a program that would help American workers displaced by free trade deals. Republicans have rejected the linkage. “I have made it clear to the president and the White House that TAA should move on its own,” House Speaker John A. Boehner, Ohio Republican, said at a news conference Friday. “We expect in the House to move four separate bills, and I would hope they would heed our advice.” On Monday, Sen. Orrin Hatch of Utah, the ranking Republican on the Senate Finance Committee, called for a meeting between members of both chambers to resolve differences.

### Republicans supporting TAA now

AP, 7/22. (Jim Abrams for the Associated Press. July 22, 2011, “Republicans clear way for worker aid, trade bills,” http://www.google.com/hostednews/ap/article/ALeqM5hqm0HsQWu6q9HBdcsV9WqoXSyxYA?docId=b03ab142fcc64f2596e31c7a48f9e6cd, CALLAHAN)

WASHINGTON (AP) — A dozen Senate Republicans say they have cleared the way for legislation to help workers displaced by foreign competition, possibly removing the main obstacle to approval of free trade agreements with South Korea, Panama and Colombia. The Obama administration supports the trade deals but says they must be linked to extension of expired sections of the Trade Adjustment Assistance program. The Republican senators said in a letter to President Barack Obama that they can assure passage of the worker aid bill by joining Democrats in moving it past any filibuster hurdles. Their support, while welcomed by the administration, may be too late for Congress to act on the aid and trade bills this before the lawmakers' summer recess begins on Aug. 6. Congress is likely to be preoccupied until then in resolving the crisis over raising the government's debt limit to avoid a first-ever U.S. default. Administration officials said this week that the Obama administration might delay sending final legislation on the three trade deals until September. Republican Sens. Roy Blunt and Rob Portman said Friday that their Republican group would provide more than enough votes to ensure Senate passage of a stand-alone, compromise version of the worker assistance bill. Blunt said he had been working with his House of Representatives and Senate colleagues for five years to find a way to advance the three trade agreements. "Today we have that path forward," he said. Democratic Sen. Max Baucus, who as chairman of the Senate Finance Committee is in charge of trade issues, said in response that "there has never been a question that TAA would have to pass in tandem with the free trade agreements, and we are open to any serious path that achieves that outcome." He said the trade deals will "provide a major boost to our economy, but we need to make sure U.S. workers have all the resources to succeed in a global economy, and TAA is the way to do that."

## SKFTA – Yes - Korea

### SKFTA will pass in Korea in coming weeks

DNK, 7/29. (Cho Jong Ik – DailyNK – brightening the future of Korea. July 29, 2011, “The GNP Will Pass the NKHRL in August,” http://www.dailynk.com/english/read.php?cataId=nk00100&num=8002, CALLAHAN)

Twenty members of the British legislative arm took the opportunity last Wednesday to send a letter to representatives of the four major South Korean political parties; the Grand National Party, Liberty Forward Party, the Democratic Party and the Democratic Labor Party, urging them to pass the North Korean Human Rights Act, which has been stalled in the National Assembly off and on for six whole years. GNP chief of policy Lee Joo Young The opposition parties which are so opposed to the bill are one problem, but the letter also criticizes the actions of the ruling majority party. It nevertheless pushes the GNP to keep trying. The GNP is now saying once again that it will pass the bill along with the US-South Korea Free Trade Agreement in the August extra session of the National Assembly, so on Wednesday The Daily NK met with Lee Joo Young, the GNP’s chief policymaker, to find out about the party’s strategy going forward at a time when many people suspect that the GNP is merely using the act as a negotiating tool. “We will try and pass this act through discussion, compromise and persuasion,” Lee claimed. “(But) if the opposition does not follow the usual legal procedure and continues to refuse the bill, then we can’t leave out the possibility we will have to push it forward, as is our right under the National Assembly Act. Actually, there is the belief within the party at the moment that that may be something we need to do.” Clearly the preference is for compromise with the Democratic Party, and to aid in this endeavor, the public, Lee says, needs to make it clear to the Democratic Party that, “Increased demand from the public to make the Democratic Party aware that this (bill) is what the public wants.”

## Spending – Yes – Debt Deal

### The current debt deal will pass

Stephanopoulos 8-1 (George, anchor of ABC's "Good Morning America." He is also the network's chief political correspondent, reporting on political and policy stories for all ABC News broadcasts and platforms, “White House 'Confident' Debt Deal Will Pass”, BBC News, 8-1-2011, <http://blogs.abcnews.com/george/2011/08/white-house-confident-debt-deal-will-pass.html>) [Crystal Hou]

White House 'Confident' Debt Deal Will Pass That's what White House Senior Advisor David Plouffe told me this morning on "GMA" when I asked if President Obama had the votes to pass the last minute debt deal. The deal is likely to pass the Senate today but the House could prove more difficult, as Jon Karl reported this morning. “Well, obviously, George, every member is going to have to make their own determination,” Plouffe said. “We’re confident that this deal will and should pass.”

## Spending DA helpers – Economy brink

### The economy is on the brink of recession – the US economy cannot handle even one more straw before its back breaks

Puzzanghera 7/30 (Jim, media and tech specialist writer for the L.A. Times, “Economic recovery faltered badly in first half of the year,” L.A. Times, 7/30/10, http://www.lexisnexis.com.turing.library.northwestern.edu/hottopics/lnacademic/)

The economic recovery faltered dramatically in the first half of the year, and that means more trouble ahead. The latest Commerce Department figures show that the nation's economic output was gasping for breath long before the debilitating debt-ceiling debate took center stage, further dimming prospects for 14 million unemployed Americans. The nation's total economic output grew at an anemic annual rate of 1.3% from April through June, below already weak expectations. The government also scaled back its estimate of first-quarter growth to a feeble 0.4%, the lowest figure since the recession technically ended two years ago. "These are disastrous numbers for the economy," said Bernard Baumohl, chief global economist at the Economic Outlook Group. "We're seeing some clear, concrete signs that the economy is teetering on the edge of recession." Those fears and the continuing debt-ceiling standoff ripped through the financial markets Friday, pushing the Dow Jones industrial average down 96 points to its sixth straight loss. It was the worst weekly performance for the index in more than a year. Economists are now talking more freely of prospects for a "double-dip" recession. Nariman Behravesh, chief economist at IHS Global Insight, pegs the odds at 30%. "When growth is so weak, it's not going to take much of a shock to push us over the edge," he said, noting that a surge in oil prices, now less than $100 a barrel, to $110 a barrel could do it. "Add on top of it all this stupidity in Washington and this is a very risky situation." On a practical level, the new data show the economy is not generating nearly enough horsepower to spur employers to hire. That means consumers will continue to keep a tight lid on the kind of spending needed to boost demand and get more people working. Consumer spending increased just 0.1% in the second quarter, a key reason for the slow growth. And weighed down by the political stalemate over the debt ceiling, consumer attitudes only worsened in July. Consumer confidence plunged this month to its lowest level since early 2009, according to the Thompson Reuters/University of Michigan Survey of Consumers released Friday. The outlook by consumers for their finances was "quite bleak" and their spending will be "barely higher" in the second half of the year, predicted Richard Curtin, the survey's chief economist. The U.S. economy has been buffeted this year by harsh winter weather, soaring gasoline prices because of Middle East unrest, and supply chain disruptions in the automotive and electronics industries caused by the Japanese earthquake and tsunami. Adding to the economic woes is the threat of a U.S. default or credit rating downgrade because Congress and the White House have been unable to raise the nation's $14.3-trillion debt ceiling. "It's creating a big issue for consumers and businesses," Behravesh said of the uncertainty over what a debt-ceiling deal would include. President Obama used Friday's economic data to push lawmakers to strike a deal before Tuesday's deadline for raising the debt ceiling. And one of his top economic advisors, Austan Goolsbee, warned that U.S. officials must "end the uncertainty surrounding the risk of default." "We are at a fragile moment in the world economy and cannot afford to do anything to undermine our recovery at a moment such as this," said Goolsbee, chairman of the Council of Economic Advisors.

## Spending Links – SPS

### Fragile economy can’t handle the high cost of clean energy

**Ferrara 11-** director of budget policy at IPI, graduate of Harvard college and Law School (4/27/11, Peter, “What Professor Obama Doesn’t Understand,” http://spectator.org/archives/2011/04/27/what-professor-obama-doesnt-un/1)gc

President Obama then thoroughly mischaracterized the differences between him and House Budget Committee Chairman Paul Ryan over the budget and taxes. Obama told the Facebook audience, "So what his budget proposal does is not only hold income tax flat, he actually wants to further reduce taxes for the wealthy, further reduce taxes for corporations, not pay for those, and in order to make the numbers work, cut 70 percent of our clean energy budget, cut 25 percent out of our education budget, cut transportation budgets by a third." There he goes again with his idea that increased government spending on "clean energy" would enhance economic growth. But saddling the economy with high cost, unreliable energy, and burdening it with an entire energy industry that can survive only on corporate welfare, is only going to tank the economy rather than promote recovery and growth.

### SPS is not realistic in today’s economy – launch costs and energy costs are too high

**Boswell** **04**-The speaker at the 1991 International Space Development Conference *(9/30/4, David, “Whatever Happened to Solar Power Satellites,”* http://www.thespacereview.com/article/214/1; speaker at the 1991 International Space Development Conference) nk

For places with plenty of sun and available land, satellites couldn’t compete with generating solar power locally. It would be difficult to argue for the need of an orbital system if every place had San Diego’s weather and climate, but since this isn’t the case there would be demand for beaming solar power to locations that couldn’t generate it otherwise. Using solar panels here on Earth though is far easier and less expensive, so much of the focus on renewable energy solutions is not on satellite systems. Another barrier is that launching anything into space costs a lot of money. A substantial investment would be needed to get a solar power satellite into orbit; then the launch costs would make the electricity that was produced more expensive than other alternatives. In the long term, launch costs will need to come down before generating solar power in space makes economic sense.

## Space Leadership Advantage Frontline

### Non-unique and no internal link – US has already ceded space leadership to Russia and China – human space flight is the key internal link

ECKMAN 11 (Dr. Jim, President of Grace University in Omaha and is Professor of History, Theology, and Ethics, The Space Shuttle Program: A Metaphor For America, Issues in Perspective, July 23 2011, <http://graceuniversity.edu/iip/2011/07/11-07-23-1/>) theo

Second, what of the future? Former President Bush proposed the Constellation Project, which was designed to return America to moon exploration and eventually trips to Mars. President Obama, upon entering office, cancelled the Project. Instead, President Obama has outlined his plans for a space program, which has as its signature element the task of ferrying people and equipment into low-Earth orbit missions using the private sector. For example, later this year two spacecraft, one designed by Orbital Sciences, a Virginia-based firm, and another by SpaceX, a California company run by Elon Musk, an internet entrepreneur, will make cargo runs to the ISS. So, without the burden of financing regular missions or the space shuttle, presumably NASA now will spend billions of dollars developing new engines, propellants, life-support systems, etc. NASA’s plans include the Space Launch System, built partly from recycled shuttle parts, and built to lift astronauts and cargo into higher Earth orbits and even further missions to Mars, asteroids, etc. Nonetheless, Obama’s comments have been vague and void of much detail. With the current budget and debt woes of the US, the brutal facts are that America is definitely in decline when it comes to space technology or leadership in such technology. The Economist correctly observes that “the space race was an outgrowth of the development of ballistic-missile technology, it was fueled by cold-war paranoia about Soviet science and it happened at a time when America’s leaders were willing to spend huge amounts on propaganda.” Furthermore, future manned missions, to say Mars, would be fraught with incredible dangers—it would take six months, not three days as it does to the moon. Further, astronauts would be bombarded with cosmic radiation and risk being baked by unpredictable solar flares. Communication between mission control and Mars would take much longer than the moon, making dealing with emergencies problematic. But non-human space missions will presumably continue. For example, robotics can alleviate some of these above-mentioned dangers, as recent robotic missions to Mars and Titan, one of Saturn’s moons, have shown. And the use of satellites will not diminish, as the enormous number of satellites currently orbiting Earth demonstrates—satellites for farming, military surveillance, telecoms, weather monitoring, TV broadcasts, etc. But it does seem that the heroic phase of space exploration is over, unless China and/or India take over the leadership. In 2003, China became the third nation to put a human into orbit atop a rocket it had developed itself. Since then, China has launched five more “taikonauts,” as the Chinese call their astronauts, have been sent into orbit. China is also launching more satellites to attract business for its Long March rockets and, later this year, it plans to build a very small space station of its own. It also plans a mission to the moon in 2017, with 2025 being a planned manned mission to the moon. Such opportunities and plans for America are distant, if not impossible, for America’s future in space is uncertain; weighed down by foreign adventures against terrorism and burdened by a crushing debt, it is difficult to see America ever again playing the leading role in space exploration. So, in a sense, the end of the space shuttle program is a metaphor for where America is—nostalgic about its past heroic achievements but presently in decline. It simply cannot afford manned space travel any longer and it is ceding such leadership to Russia and perhaps even to China. It is a most interesting and rather sad development.

### And, more evidence – NASA budget cuts means US has already given up our leadership position

**Cunningham 10**  **(**Walter Cunningham is a retired [American](http://en.wikipedia.org/wiki/United_States) [astronaut](http://en.wikipedia.org/wiki/Astronaut). he was the [Lunar Module](http://en.wikipedia.org/wiki/Apollo_Lunar_Module) pilot on the [Apollo 7](http://en.wikipedia.org/wiki/Apollo_7) mission. He was NASA's third civilian astronaut, and has also been a fighter pilot, physicist, entrepreneur, venture capitalist, author of *The All-American Boys*, lecturer, and host of the radio show *Lift-off to Logic*. “Taking a bit out of NASA”, 2/6/2010, <http://www.chron.com/disp/story.mpl/editorial/outlook/6854790.html>) Connor Smith

President Barack Obama's budget proposal may not be a death knell for NASA, but it certainly would accelerate America's downward spiral toward mediocrity in space exploration. Now it's up to NASA's leaders to put the best face possible on this nail that the administration is trying to hammer into their coffin. This proposal is not a “bold new course for human spaceflight,” nor is it a “fundamental reinvigoration of NASA.” It is quite the opposite, and I have no doubt the people at NASA will see it for what it is — a rationalization for pursuing mediocrity. It mandates huge changes and offers little hope for the future. My heart goes out to those who have to defend it. NASA has always been a political football. The agency's lifeblood is federal funding, and it has been losing blood for several decades. The only hope now for a lifesaving transfusion to stop the hemorrhaging is Congress.

## Space Leadership Adv Ans – Exts – US already ceded control

### **America already ceded space leadership – their impacts should’ve already happened**

Cherry 11 (Mary Alys, Director of the Rotary National Award for Space Achievement Foundation, Inc., “Moon men: U.S. space leadership slipping,” The Bay Area Citizen, 5/29/11 <http://www.yourhoustonnews.com/bay_area/news/article_9857fa1d-60e9-511c-81a7-e7eb08e87c1f.html>) Hegyi

However, they continue, “today America's leadership in space is slipping. NASA's human spaceflight program is in substantial disarray with no clear-cut mission in the offing. We will have no rockets to carry humans to low-Earth orbit and beyond for an indeterminate number of years. “Congress has mandated the development of rocket launchers and spacecraft to explore the near-solar system beyond Earth orbit. But NASA has not yet announced a convincing strategy for their use. After a half-century of remarkable progress, a coherent plan for maintaining America's leadership in space exploration is no longer apparent. “Kennedy launched America on a new ocean. For 50 years we explored the waters to become the leader in space exploration. Today, under the announced objectives, the voyage is over. John F. Kennedy would have been sorely disappointed.”

### US has conceded space leadership- Not enough funding- Russia now in prime position

**Hawkins 11** (William R. Hawkins is a consultant specializing in international economic and national security issues. He is a former economics professor, “Forfeiting U.S. Leadership in Space”, March 7 2011, <http://www.familysecuritymatters.org/publications/id.8906/pub_detail.asp>) connor

The space shuttle "Discovery" is scheduled to complete its 13 day supply mission to the International Space Station (ISS) on March 9. It is the 135th space shuttle mission since the "Columbia" first lifted off on April 12, 1981. There are only two missions left in the program, one in April for the "Endeavor" and one in June for "Atlantis."  The shuttles will have flown for over 30 years, during which time it should have been expected that a replacement system would have been developed. But it has not been. Even the loss of "Challenger" in 1986 and "Columbia" in 2005 did not spark action. When the shuttles are retired this summer, there is nothing to replace them; indeed, there is not even anything close to being ready. Presidents George W. Bush (2003) and Barack Obama (2010) cancelled shuttle replacement programs. The great lead that the United States has enjoyed in space since the first Moon landing on July 20, 1969 has been thrown away due to a lack of imagination in Washington. The National Aeronautics and Space Administration (NASA) has put out its [2011 Strategic Plan](http://www.nasa.gov/pdf/516579main_NASA2011StrategicPlan.pdf). Its first goal is to "extend and sustain human activities across the solar system." As the lead civilization of the current era, it is America's duty to advance human achievement. Yet, there is very little in the NASA plan or budget to fulfill this noble goal. The NASA plan relies first and foremost on "expanding efforts to utilize the ISS as a National Laboratory for scientific, technological, diplomatic, and educational purposes and for supporting future objectives in human space exploration." But without the shuttle or a replacement space vehicle, the U.S. will be dependent on the Russians for access to the ISS. Yes, the Russians, who lost both the Space Race and the Cold War in the last century, are now poised to control the ISS. The Russians, it should be remembered, were invited into the ISS because the U.S., even though it was the richest nation on the planet and the world's most advanced scientific state, was looking for other countries to put up money for the ISS to lighten its own "burden." It would be hard to find a better example of the old adage "penny wise, but pound foolish."

## Space Leadership Adv Ans – Guts US/Sino relations

### **US pursuit of space leadership guts US-Sino relations**

Johnson-Freese 04 (Joan, the chair of the Naval War College’s National Security Decision Making Department, “Space Wei Qi: The Launch of Shenzhou V,” Naval War College Review, Spring 2004, <http://findarticles.com/p/articles/mi_m0JIW/is_2_57/ai_n6112689/>) Hegyi

Apparently, since rumors of consideration of a reinvigorated U.S. manned space effort began within two months of the successful Chinese launch, Washington realized that “doing nothing” was not an option. If the United States ignored the Chinese launch, China would simply seek out and likely find other countries more favorably disposed to working with it. That would leave the United States in the seeming position of having been “caught,” if not overtaken, by the Chinese in a manned space race driven by public perceptions, as well as the very real likelihood of more unwanted partnerships, of the Galileo variety, between China and third nations or groups, with the United States increasingly the odd man out. Although the American public was apathetic about Yang Liwei’s flight, the fickle nature of the public meant that could change. If the Chinese continued with manned space activity and the United States continued on an ambivalent path, the latter would eventually have to decide if it were comfortable with an overall first place in space but gold medals for China in manned space exploration and development. China’s technology would not have outpaced that of the United States, but its sustained political commitment would have. With the status quo not being an option, the relevance of how the United States would reinvigorate its program becomes critical. Simply announcing intent says little, as the devil is always in the details. The United States can declare a space race, unilaterally developing a long-awaited manned program to return to the moon or a manned Mars mission, or some combination of the two. However, it is unlikely that the ISS partners would support a program developed without their input; in fact, their post–Shenzhou V congratulatory messages, especially those of Russia and Europe, suggest that they would support no program that excluded the Chinese. Further, the continuing financial and technical problems of the still-incomplete ISS make it unlikely that its sponsors will be anxious to commit themselves, even if invited, to an expanded manned program. ISS is struggling. Debate followed the 20 October 2003 arrival of the fresh crew at the station when it was disclosed that some NASA staff felt the station unsafe, because air, water, and radiation monitors, medical devices, and some other systems were ailing or broken. NASA management itself declared the overall station safe, at least temporarily. Clearly, however, ISS needs immediate attention and possibly additional funding. The benefits to the United States of a competitive approach are the same kinds it enjoyed earlier with Apollo—prestige, technology development, and jobs in aerospace. At the risk of losing face and allowing the technology gap to grow, China would be pushed to put more money into its manned program and at a faster rate than it would otherwise have, thereby diverting it from military programs. It would be the equivalent of forcing the Soviet Union to spend money to counter Strategic Defense Initiative (“Star Wars”) technology. There are three drawbacks to this approach: Can the United States afford this kind of a program and maintain the requisite political will to fund it through completion? Is this really the best long-term strategy for long-term U.S.-China relations? Does, finally, the United States want to reinforce the view that it prefers unilateralism to multilateralism?

### **Chinese-American relations are key to preventing nuclear war and global warming**

Despres 01 (John, former Assistant Secretary of Commerce, “American Interests in and Concerns with China” China, the United States, and the Global Economy, RAND, 2001, <http://www.usnwc.edu/getattachment/ba695c64-2c13-4913-a6f5-9ebcec9aa311/Space-Wei-Qi--The-Launch-of-Shenzhou-V---Johnson-F>) Hegyi

Nevertheless, America’s main interests in China have been quite constant, namely peace, security, prosperity, and a healthy environment. Chinese interests in the United States have also been quite constant and largely compatible, notwithstanding sharp differences over Taiwan, strategic technology transfers, trade, and human rights. Indeed, U.S.-Chinese relations have been consistently driven by strong common interests in preventing mutually damaging wars in Asia that could involve nuclear weapons; in ensuring that Taiwan’s relations with the mainland remain peaceful; in sustaining the growth of the U.S., China, and other Asian-Pacific economies; and, in preserving natural environments that sustain healthy and productive lives. What happens in China matters to Americans. It affects America’s prosperity. China’s growing economy is a valuable market to many workers, farmers, and businesses across America, not just to large multinational firms like Boeing, Microsoft, and Motorola, and it could become much more valuable by opening its markets further. China also affects America’s security. It could either help to stabilize or destabilize currently peaceful but sometimes tense and dangerous situations in Korea, where U.S. troops are on the front line; in the Taiwan Straits, where U.S. democratic values and strategic credibility may be at stake; and in nuclear-armed South Asia, where renewed warfare could lead to terrible consequences. It also affects America’s environment. Indeed, how China meets its rising energy needs and protects its dwindling habitats will affect the global atmosphere and currently endangered species.

## Space Colonization Neg – Status Quo solves

**And, the status quo solves your Aff – Obama is already prioritizing getting us back to the moon**

Stirland 11 ( Sara Stirland, veteran business and politics repoter at Bloomberg wealth manager, business 2.0, CNN, Congress Daily, The New York Post, POLITICO, and wired.com, “NASA’s Bolden: American Space Exploration Not Dead – We’re Planning a Mission to An Asteroid,” 7/31/11) Hou

Former astronaut and current NASA Administrator Charles Bolden hit back at the media on Friday for characterizing the space shuttle's last flight as the end of the American-led age of space exploration. "President Obama has given **us** a Missionwith a capital 'M' **--** focus again on the big picture of exploration and the crucial research and development that will be required for us to move beyond low Earth orbit," he said in a speech delivered at the National Press Club in Washington, D.C. NASA's space shuttle Atlantis will blast off from the Kennedy Space Center in Florida to the International Space Station for the last time on Friday, July 8. He added: **"**He's charged us with carrying out the inspiring missions only NASA can do that will take us farther than we've ever been. To orbit Mars and eventually land on it. He's asked us to start planning a mission to an asteroid. The president is asking us to harness that American spirit of innovation, the drive to solve our problems and create capabilities that is so embedded in our story and has led us to the moon, to great observatories, and to humans living and working in space, possibly indefinitely. That American ingenuity is alive and well, and it will fire up our economy and help us create and win the future now." If Bolden sounds a bit touchy, he was probably reacting to The Economist, which has dedicated the cover of next week's edition to the end of the shuttle program, and the symbolism that holds for America's place in the world. The Economist refers to space enthusiasts as "space cadets," and basically says that the era of exciting human-led space exploration is over, and that all the cool, useful stuff is going to happen in orbit around Earth. And any future exciting exploratory trips will probably be undertaken by the Chinese or robots, its writers add in a couple of articles. And that's just as well, argues The Economist, because manned space flight is a waste of time and money, and "the benefits are hard to measure." "The heroic phase of space exploration, with chiselled-jawed astronauts venturing where no man has gone before, inspiring schoolchildren and defending democracy (or socialism,) is now a thing of the past. Mr. Obama's plan may revitalize NASA and send American astronauts into the solar system once again. But the agency's history as a political football suggests it is unlikely."

## Solar Powered Satellites Neg – EU CP helpers

### The EU is the most qualified for SPS—they have been keen on it since 2002

**Summerer, 2009,** (Leopold, head of ESA Advanced Concepts Team, “Solar Power Satellites – European Approach”, July 28, 2009, <http://www.esa.int/gsp/ACT/doc/POW/ACT-RPR-NRG-2004-Kobe02-SPS-European_approach.pdf>) [Waxman]

The European Union has identified research areas for the 6th Framework Programme. In order to focus the different European activities on SPS, a European Network on Solar Power Satellites was established in August 2002, following an initiative of the Advanced Concept Team of the European Space Agency. One of the goals is to position research on the space option of renewable energies in the context of research on sustainable development in Europe. For this purpose, a meeting was held in Paris on August 28, 2002, gathering representatives from European research institutes, agencies and industry engaged in research on SPS.

## Space Debris Negative – EU CP helpers

### ESA solves space debris – advance tracking

ESA 9 (European Space Agency, “Space Debris Measurements”, 2/19/09, http://www.esa.int/esaMI/Space\_Debris/SEMD31WPXPF\_0.html)

ESA collaborates primarily with the operators of the German TIRA system (Tracking and Imaging Radar), located at FGAN (Research Establishment for Applied Science), near Bonn, Germany. TIRA has a 34-metre dish antenna operating in L-band for debris detection and tracking (1.333 GHz, 0.45º beam width, at 1 MW peak power). Apart from tracking campaigns, the radar also conducts regular beam park experiments, where the radar beam is pointed in a fixed direction for 24 hours, so that the beam scans 360º in a narrow strip on the celestial sphere, during a full Earth rotation. In such experiments, TIRA can detect debris and determine coarse orbit information for objects of diameters down to 2 cm at 1000 km range. In a bi-static mode, together with the 100m receiver antenna of the nearby Effelsberg radio telescope, the overall sensitivity increases toward 1-cm objects. A special seven-horn receiver, developed for the Effelsberg radio telescope, allows better resolution of object passages, permitting a reliable assessment of the object's radar cross-section.

## Climate Satellites Negative – Spending DA Links

### Climate Satellites expensive – cost 2 billion

### **GAO 97** [United States General Accounting Office March 1997 "Weather Satellites" goes.gsfc.nasa.gov/text/gao97.goes.pdf]kho

The GOES system, which has been operational since 1975, plays a critical role in weather forecasting. The continuous availability of GOES data is vital to the success of the National Weather Service’s (NWS) approximately $4.5 billion systems modernization program. GOES satellites are uniquely positioned to observe the development of hazardous weather, such as hurricanes and severe thunderstorms, and track their movement and intensity so that major losses of property and life can be reduced or avoided. GOES satellites have two primary meteorological instruments: an imager and a sounder. The imager collects digital images of portions of the earth’s surface from radiation that is sensed at five different wavelengths. The sounder is mechanically similar but sensitive to a broader range of spectral wavelengths, which allows it to measure natural variables, such as temperature and humidity, at different levels of the atmosphere. NOAA’s operational strategy calls for two GOES satellites to be active at all times—one satellite to observe the Atlantic Ocean and eastern half of the United States, and the other to observe the Pacific Ocean and the western part of the country. Two GOES satellites are currently in orbit—GOES-8 covering the east and GOES-9 in the west. These satellites were launched in 1994 and 1995, respectively. Even though satellites in the GOES series have been operational for over 20 years, only one major design change has been implemented. The first generation design, used on GOES-1 through GOES-7, was developed experimentally by the National Aeronautics and Space Administration (NASA) and subsequently came to be relied upon for the operational system. The second generation, called GOES-Next, represents a complete redesign of the spacecraft and its instruments that allows for the collection of substantially more and better weather data. The GOES-Next series includes the two currently operational satellites, GOES-8 and GOES-9, plus three additional spacecraft that are in different stages of production. Development of this second generation experienced severe technical problems, cost overruns, and schedule delays. For example, NOAA’s estimate of the overall development cost for GOES-Next grew from $640 million in 1986 to $2.0 billion in 1996. Also, a nearly 5-year schedule slip in the launch of the first GOES-Next satellite left NOAA at one point in real danger of temporarily losing geostationary satellite data coverage, although no gap in coverage ever actually occurred. GAO reported in 1991 that design complexity, inadequate management of the program by NOAA and NASA (NOAA’s agent for the procurement), and poor contractor performance all contributed to the cost, schedule, and technical problems experienced by GOES-Next.1 Although some technical problems remain, the first two of these satellites are now producing useful, high quality weather data daily.

## Space Situational Awareness Neg – EU CP helpers

### The ESA is already developing a highly advanced SSA System

ESA, 6-6-2011 (Scanning the skies for debris hazards, ESS 2011, http://www.esa.int/esaMI/SSA/SEM61NJ4LOG\_0.html)

Since 2009, the Agency's SSA team has been working to define the system's overall technical structure, while actively evaluating existing European assets, such as scientific research radars and telescopes, which could contribute to SSA. The development strategy is based on an extensive use of national and European assets, as well as the procurement of the missing components of the future SSA System. 2011 is a busy year for SSA surveillance development activities, perhaps the most urgent leg of the programme. A new generation of software was recently implemented to warn when satellites could be hit by orbiting debris. "At the moment, it is undergoing extensive testing using known debris orbits, but it's a first step toward the software we'll use when Europe has its own surveillance capability," says ESA's Emmet Fletcher, Head of the Space Surveillance and Tracking Segment at the SSA programme office. Hosting an international conference like ESS2011 is crucial for staying up to date with global best practises and meeting scientific experts who work with current-generation radars and telescopes. Debris surveillance is a complex engineering and scientific challenge in part due to the fact that even a tiny piece of debris - just 1 centimetre across - can seriously damage or even destroy a functioning satellite if it impacts at orbital velocities. "We are now finalising a pan-European survey and test of existing tracking facilities, such as radars and telescopes located in France, Germany, Italy, Norway, UK, Switzerland and Spain," says Emmet. "Knowing how precise these are is fundamental to designing ESA's new SSA system, which may make use of their data in combination with debris readings obtained by new, highly accurate radars and telescopes in the future. "We know there is a huge amount of knowledge across Europe and globally. Having a single forum where experts from around the world can meet and present new information is vital and helps move our collective know-how forward. "New techniques, new approaches and sharing past experience helps all space-faring nations work more safely in orbit.

### Europe has world-class expertise in designing and building SSA systems

**Science Daily**, 7-23-**2010** (European Space Agency Develops Radar to Watch for Space Hazards, Science Daily, http://www.sciencedaily.com/releases/2010/07/100723093842.htm?utm\_source=feedburner&utm\_medium=feed&utm\_campaign=Feed%3A+sciencedaily+%28ScienceDaily%3A+Latest+Science+News%29)

The contract includes the design of the future SSA radar and the design, development and installation of a small-scale phased-array radar demonstrator to validate the full-scale radar. The contract is valued at €4.7 million and will help Europe's space industry maintain its world-class technical expertise. Fostering European expertise In addition to managing the project, Indra Espacio is responsible for the design and development of the radar transmitter. Building the radar receiver will be subcontracted to the Fraunhofer Institute for High Frequency Physics and Radar Techniques, based in Wachtberg, Germany. "Both organisations have extensive experience in the design and development of cutting-edge technology for space applications and we are very pleased to be working with them at this early stage of the SSA Programme," said Nicolas Bobrinsky, ESA's SSA Programme Manager. In a parallel contract with the Agency, Indra Espacio are also surveying a suitable site for the radar to be located in an ESA Member State. Prompt and precise information The radar will provide prompt and precise information on objects orbiting Earth. Using these data, a wide range of services will be possible, such as warnings of potential collisions between these objects and operational satellites and alerts on when and where debris enters Earth's atmosphere. The full SSA system will also make use of a number of optical telescopes together with networked data processing centres to enable the system to observe objects in all populated orbital regions. While radar technology works most efficiently for the surveillance of objects in low and highly elliptical orbits, optical surveillance is better for objects in medium and geostationary orbits.