St. Mark’s TS Disadvantages (1/9/12)

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DA Politics (Current VErsion)

## 1NC Shell

**Payroll tax extension is Obama’s only focus --- passage is likely and he sees it as key to his overall political strategy**

**Lee, 12/30** (Carol E., WSJ Online, 12/30/2011, “White House Looks to Shrunken 2012 Legislative Agenda,” Factiva)

HONOLULU—President Barack Obama heads into 2012 with a legislative agenda that essentially consists of just a single item—a long-term extension of a payroll tax holiday—deferring a fight over deficit reduction and the Bush-era tax cuts and all but giving up on the remaining components of his jobs bill as he pivots to an election-year strategy of attacking Congress.

White House spokesman Josh Earnest said extending the payroll tax break through next year, a fight that will consume Congress after lawmakers return to Washington in January, is "the last must-do item of business on the president's congressional agenda."

"There are certainly other things that the president would like to do," Mr. Earnest said, adding that Mr. Obama will continue to prod Congress to pass some of his jobs proposals. "But in terms of essential, must-do items, the payroll-tax-cut extension is the last one."

Mr. Obama will also step up his use of his executive authority in the New Year, Mr. Earnest said, by announcing at least several new economic initiatives each week.

The president's central focus after he returns to Washington next week from a vacation in Hawaii will be on the payroll-tax cut, which has become a catalyst for his 2012 political message.

The tax break for 160 million workers was set to expire at the end of the year before Congress extended it in December for two months. Mr. Obama called for a year-long extension as part of the $447 billion jobs bill he unveiled in September and spent the month before Christmas pressuring congressional Republicans to pass it.

Many conservative House Republicans opposed the extension on policy grounds, but the GOP leadership saw it as inevitable and tried to use the opportunity to force the White House to swallow policy items favored by Republicans, such as the construction of the Keystone XL oil pipeline from Canada to the Gulf Coast. Once the parties could not resolve differences over how to pay for the tax break, the Senate agreed to the two-month extension, catching rank-and-file House members off guard and setting them up to be the obstacle to the tax cut, a politically untenable position for a party that portrays itself as the champions of low taxes.

Seeking to regain their footing, congressional Republicans are adopting their own 2012 strategy. Sen. Johnny Isakson of Georgia said Saturday in the weekly Republican address that GOP lawmakers will push an ambitious economic agenda focused on a tax and regulation overhaul and energy security. He made no mention of the payroll-tax cut.

"As we enter into this New Year, many have predicted that Congress will be too consumed with the fall elections to accomplish anything significant," Mr. Isakson said. "Americans cannot wait until after the November election. They need us to do our job and do it right now to create an economic climate that makes it easier to put people back to work. Republicans stand ready to do that."

The White House believes the December payroll-tax-cut debate afforded Mr. Obama, who initially proposed paying for the extension with a tax increase on millionaires, the political upper hand and momentum heading into 2012.

The president's aides are convinced Congress will ultimately extend to the end of 2012 the current 4.2% payroll tax levied to fund Social Security, rather than allowing it to return to 6.2%, because all sides have now made clear they support the idea, leaving no room for a reversal. But the extension won't happen without a fight between the two parties, and Mr. Obama will try to capitalize on the moment by deploying his now-familiar message of being a champion of the middle class.

Mr. Obama urged Congress on Saturday to "finish the job" on the payroll tax break in his weekly radio and Internet address. "As I've said before, we are at a make-or-break moment for the middle class," Mr. Obama said. "And in many ways, the actions we take in the months ahead will help determine what kind of country we want to be, and what kind of world we want our children and grandchildren to grow up in."

**Obama’s consistent focus on the middle class economy is reinvigorating his political strength --- key to yearlong extension of payroll tax cut,**

**Calmes, 12/24** (Jackie, 12/24/2011, International Herald Tribune, “Big gains in a small victory for Obama; President offers a lesson on how and when to pick the right political battle,” Factiva)

President Barack Obama did not win much substantively with his victory over House Republicans in their showdown over extending payroll tax cuts and unemployment aid for two months. But he got a lot politically: a big start toward retiring the perception — fair or not, and even among Democrats — that in a pinch with the other party he will inevitably surrender.

In less than an hour Friday, the House and Senate dispensed with weeks of partisan bickering, passing a bill to ensure a two-month extension of the tax holiday and unemployment benefits for millions of Americans. Mr. Obama then signed it into law.

The fight over how and whether to pass an extension was settled Thursday afternoon, when the House speaker, Representative John A. Boehner of Ohio, agreed — against the will of many of the chamber’s most conservative members — to a Senate bill to extend the benefits for two months while a longer deal was hammered out.

The perception of weakness had dogged Mr. Obama for much of the year since gains by Republicans in the 2010 midterm elections gave them control of the House and a share of power in Washington. But it became threatening, both to Mr. Obama’s leverage with Congress and to his prospects for re-election, after the epic summer fight over raising the nation’s debt limit.

In September, the White House set out to change the image of Mr. Obama from compromiser in chief to determined voice of economic populism, beginning a push for a job-creation plan that it viewed as a win-win. Either Mr. Obama would pass his plan — which was not likely given Republican opposition both to additional stimulus measures and to the higher taxes on the wealthy that he proposed to offset the package’s cost — or he would get political credit for trying, given the popularity of the plan’s individual provisions.

And he would make it clear that Republicans would obstruct anything he proposed, especially if it meant higher taxes on the rich.

What surprised the administration, and not least Mr. Obama, was how much House Republicans would contribute toward the White House’s goal through their miscalculations in waging this holiday-season showdown over tax cuts for 160 million workers and assistance for several million jobless Americans.

The stand by House Republicans, which openly divided the party and put them in conflict with Senate Republicans, helped Mr. Obama perhaps as much as anything the White House and congressional Democrats did.

Vin Weber, a Republican Party strategist and former congressman, acknowledged that Mr. Obama had won at least ‘‘a nice tactical victory to end the year’’ as well as higher approval ratings in recent polls. Mr. Weber said he learned long ago from a pollster to President Ronald Reagan that ‘‘one of the central ingredients of a president’s approval rating is the public’s sense of his ability to dominate Congress.’’

‘‘The substantive issues,’’ he said, ‘‘are secondary.’’

‘‘What Republicans in the House didn’t understand — and I love these guys by and large — but what they didn’t understand is that you don’t fight every issue,’’ Mr. Weber added. ‘‘And if you’re going to fight an issue like this, you’re going to give him a victory and hurt yourself in the process.’’

As glum and divided as Republicans were at the outcome, Democrats were celebrating that Mr. Obama had stuck by the united front he forged with them this fall.

‘‘The White House must feel pretty good about muscling home a victory for the middle class,’’ said John Podesta, chairman of the liberal Center for American Progress and a former chief of staff to President Bill Clinton. ‘‘And importantly for the fights of 2012, they learned those muscles work.’’

Congressional Democrats have long been suspicious that Mr. Obama was too eager to cut deals with Republicans that would benefit him politically but not his party — by reducing Medicare and Social Security spending, for example, to get a so-called grand budget bargain. But this week they freely credited him with the victory, for his persistence and his refusal in the endgame to negotiate with House Republicans.

An aide to congressional Democratic leaders said, ‘‘The White House just went all in and closed off the House G.O.P.’s hoped-for exit ramp’’— that is, Republicans’ belief that Mr. Obama would ultimately give in rather than risk blame if payroll taxes went up for millions on Jan. 1.

For the White House, which has long chafed at the criticism that Mr. Obama has been a soft touch for Congressional Republicans, the outcome was vindication.

Last December, liberal Democrats were outraged when Mr. Obama agreed to extend the expiring Bush-era tax cuts for the rich by an additional two years, after having campaigned to end them. The White House said that was the price to get Republicans, who were newly emboldened by their election victories, to support a one-year payroll tax cut and extended unemployment aid — without which, the administration and many economists believed, the economy could tip into another recession.

Most galling to the White House, however, has been the lingering criticism from Democratic insiders and grass-roots supporters alike about the August debt-limit deal. In that compromise, Mr. Obama accepted deep spending cuts but Republicans blocked any tax increases.

Mr. Obama had no choice but to compromise then, his aides argued; the nation risked economic calamity if it could no longer borrow to pay its debts, and Mr. Obama’s Republican adversaries professed to be willing to see that happen. Even so, administration officials said, the deal was not only better than the critics suggested but it helped set the trap that House Republicans walked into this month.

The deal increased the debt ceiling through 2012, not to this month as some Republicans had wanted, and thereby removed the threat of default from Republicans’ end-of-the-year bargaining arsenal. With the stakes much lower, after August Mr. Obama was liberated to press a harder bargain. Starting in September with his jobs package, he did.

‘‘For the first time I think you see a kind of consistency and coherency in terms of an economic message,’’ Geoff Garin, a Democratic pollster, said of Mr. Obama. ‘‘The pivot point was the jobs speech, and the jobs speech occurred after he had dealt with the extension of the tax cuts and dealt with the debt ceiling. Those two things freed him up to do what he’s been doing.’’

Also a factor was the hard lesson Mr. Obama learned from his past negotiations with Mr. Boehner, first in the spring talks over this year’s domestic spending and then in their summer effort for the grand bargain to reduce long-term debt: Mr. Boehner cannot deliver his defiantly anti-government and Tea Party-inspired majority in the House.

When that proved true yet again, Mr. Obama was bolstered just as Mr. Boehner was further undermined. Whether Mr. Obama continues to play a strong hand will be tested soon — when Congress reconvenes in January to resume the fight over a full-year extension.

**Full extension key to prevent a double dip recession**

**Stewart, 12/28** --- Observer's economics editor (Heather,12/28/2011, “Extending Obama's tax cuts should be new year's resolution for Republicans,” http://www.guardian.co.uk/business/economics-blog/2011/dec/28/obama-tax-cuts-new-year-resolution?newsfeed=true)

Republicans caved in at the last minute last week and agreed to a two-month extension of the tax cut package that had become the latest focus of toxic partisan wrangling on Capitol Hill.

In signing up to the deal – under which a bipartisan committee will now try to draft legislation extending the tax-cuts through 2012 – Republicans were thinking about their electoral prospects, as well as their chances of a Christmas break. Fiscal prudence is all very well, but being dubbed the party that stood between cash-strapped families and a tax-break is unlikely to be a winning formula in an election year.

However, research from the non-partisan Council on Foreign Relations reveals that extending the tax cuts is not just a political debating point, but one of the few factors preventing the US sliding into a double-dip downturn in the new year.

Personal consumption – spending, in other words – accounted for 91% of the 1.2% GDP growth the US economy achieved in the year to September, as Washington cut back and exports were weak.

Using official figures, the CFR shows that less than half of that crucial increase in consumption resulted from rising incomes, with the rest coming from what they call "unsustainable items". More than a third – 36% – came from reduced savings, as Americans dipped into their rainy-day funds to cope with unemployment and lacklustre wage growth. And another 20% came from the payroll tax.

That shows that the emergency tax-cut package, which included a 2% cut in the payroll tax (similar to national insurance contributions in Britain) was doing its job, helping to prevent the economy sliding into a renewed recession in 2011. But when they were introduced a year ago, the cuts were meant to be a short-term boost to consumption, helping to prop up the economy until the good times returned.

Recent data from the US has been relatively upbeat, including news that American firms created 120,000 jobs in November.

But unemployment remains well above normal, at 8.6%; the housing market is still in the doldrums; and with America's trading partners in Asia and Europe heading for hard times in 2012, the economic climate is about to get tougher. Reversing the tax cut in two months' time could reduce workers' take-home pay at the worst possible time.

Like the so-called "super-committee" that was meant to secure a cross-party agreement on crucial public spending cuts and ended instead in a rancourous stand-off, the new committee meant to decide the future of the tax-cuts may fail; if so, it won't just be the Republicans' reputation that suffers.

**This will trigger a depression**

**Isidore, 8/10** (Chris, 8/10/2011, “Recession 2.0 would hurt worse,” http://money.cnn.com/2011/08/10/news/economy/double\_dip\_recession\_economy/index.htm)

And while economists disagree on just how likely the U.S. economy is to fall into another downturn, they generally agree on one thing -- a new recession would be worse than the last and very difficult to pull out of.

"Going back into recession now would be scary, because we don't have the resources or the will to respond, and our initial starting point is such a point of weakness," said Mark Zandi, chief economist at Moody's Analytics. "It won't feel like a new recession. It would likely feel like a depression."

Zandi said the recent sell-off in stocks have caused him to raise the odds of a new recession to 33% from 25% only 10 days ago.

Other economists surveyed by CNNMoney are also raising their recession risk estimates. The survey found an average chance of a new recession to be about 25%, up from a 15% chance only three months ago.

Of the 21 economists who responded to the survey, six have joined Zandi in increasing their estimates in just the last few days. The main reason: the huge slide in stocks. Standard & Poor's downgrade of the U.S. credit rating is another concern.

"The correction in equity markets raises the risk of recession due to the negative hit to wealth and confidence," said Sal Guatieri, senior economist for BMO Capital Markets.

Even with a 430-point rebound in the Dow Jones industrial average Tuesday following the Federal Reserve meeting, major U.S. stock indexes have lost more than 11% of their value over the last 12 trading days.

Recovery at risk

A plunge in stocks doesn't necessarily mean a new recession. The economy avoided a recession after the stock market crash of 1987.

"Stock price declines are often misleading indicators of future recessions," said David Berson, chief economist of BMI Group.

But with the economy already so fragile, the shock of another stock market drop and resulting loss of wealth could be the tipping point.

"It really does matter where the economy is when it gets hit by these shocks," said Zandi. "If we all pull back on spending, that's a prescription for a long, painful recession," he said.

Most economists say they aren't worried that S&P's downgrade makes recession more likely, although a few said any bad news at this point increases the risk.

"The downgrade has a psychological impact in terms of hurting consumer confidence," said Lawrence Yun, chief economist with the National Association of Realtors.

On shakier ground

Another recession could be even worse than the last one for a few reasons.

For starters, the economy is more vulnerable than it was in 2007 when the Great Recession began. In fact, the economy would enter the new recession much weaker than the start of any other downturn since the end of World War II.

Unemployment currently stands at 9.1%. In November 2007, the month before the start of the Great Recession, it was just 4.7%.

And the large number of Americans who have stopped looking for work in the last few years has left the percentage of the population with a job at a 28-year low.\

Various parts of the economy also have yet to recover from the last recession and would be at serious risk of lasting damage in a new downturn.

Home values continue to lose ground and are projected to continue their fall. While manufacturing has had a nice rebound in the last two years, industrial production is still 18% below pre-recession levels.

There are nearly 900 banks on the FDIC's list of troubled institutions, the highest number since 1993. Only 76 banks were at risk as the Great Recession took hold.

But what has economists particularly worried is that the tools generally used to try to jumpstart an economy teetering on the edge of recession aren't available this time around.

"The reason we didn't go into a depression three years ago is the policy response by Congress and the Fed," said Dan Seiver, a finance professor at San Diego State University. "We won't see that this time."

Three times between 2008 and 2010, Congress approved massive spending or temporary tax cuts to try to stimulate the economy. But fresh from the bruising debt ceiling battle and credit rating downgrade, and with elections looming, the federal government has shown little inclination to move in that direction.

So this new recession would likely have virtually no policy effort to counteract it.

**Broad statistical models prove – unmanaged economic declines lead to global conflict**

**Royal, Director of cooperative threat reduction, ‘10** [Jedediah, Director of Cooperative Threat Reduction – U.S. Department of Defense, “Economic Integration, Economic Signaling and the Problem of Economic Crises”, Economics of War and Peace: Economic, Legal and Political Perspectives, Ed. Goldsmith and Brauer, p. 213-215]

Less intuitive is how periods of economic decline may increase the likelihood of external conflict. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson's (1996) work on leadership cycle theory, finding that rhythms in the global economy are associated with the rise and fall of a pre-eminent power and the often bloody transition from one pre-eminent leader to the next. As such, exogenous shocks such as economic crises could usher in a redistribution of relative power (see also Gilpin. 1981) that leads to uncertainty about power balances, increasing the risk of miscalculation (Feaver, 1995). Alternatively, even a relatively certain redistribution of power could lead to a permissive environment for conflict as a rising power may seek to challenge a declining power (Werner. 1999). Separately, Pollins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland's (1996, 2000) theory of trade expectations suggests that 'future expectation of trade' is a significant variable in understanding economic conditions and security behaviour of states. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However, if the expectations of future trade decline, particularly for difficult to replace items such as energy resources, the likelihood for conflict increases, as states will be inclined to use force to gain access to those resources. Crises could potentially be the trigger for decreased trade expectations either on its own or because it triggers protectionist moves by interdependent states.4 Third, others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess (2002) find a strong correlation between internal conflict and external conflict, particularly during periods of economic downturn. They write: The linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favour. Moreover, the presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other. (Blomberg & Hess, 2002. p. 89) Economic decline has also been linked with an increase in the likelihood of terrorism (Blomberg, Hess, & Weerapana, 2004), which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a sitting government. "Diversionary theory" suggests that, when facing unpopularity arising from economic decline, sitting governments have increased incentives to fabricate external military conflicts to create a 'rally around the flag' effect. Wang (1996), DeRouen (1995). and Blomberg, Hess, and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997), Miller (1999), and Kisangani and Pickering (2009) suggest that the tendency towards diversionary tactics are greater for democratic states than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that periods of weak economic performance in the United States, and thus weak Presidential popularity, are statistically linked to an increase in the use of force. In summary, recent economic scholarship positively correlates economic integration with an increase in the frequency of economic crises, whereas political science scholarship links economic decline with external conflict at systemic, dyadic and national levels.5 This implied connection between integration, crises and armed conflict has not featured prominently in the economic-security debate and deserves more attention.

## Link – Generic

**Plan costs political capital – Obama will push through congressional opposition**

**Powell 9** (Stewart M., Washington Bureau – Houston Chronicle, “Potential Uphill Battle for NASA”, Houston Chronicle, 9-13, http://www.chron.com/disp/story.mpl/nation/6615751.html)

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 Accident Investigation Board. “The president has to use some portion of his political capital to put forward an Obama space program.”

## Link – Vision for Space Exploration

**Expanding VSE is perceived as controversial new spending**

**Handberg, 11** - Professor and Chair of the Department of Political Science at the University of Central Florida (Rodger, “Small ball or home runs: the changing ethos of US human spaceflight policy,” The Space Review, 1/17, http://www.thespacereview.com/article/1759/1)

The US space program remained focused, not on duplicating Apollo, but on achieving another difficult goal such as going to Mars, a logical extension truly of the Apollo effort. Twice, the presidents Bush provided the presidential rationale, if not support, for achieving great things. The Space Exploration Initiative (SEI) in 1989 and the Vision for Space Exploration (VSE) in 2004 were announced with great fanfare but neither survived the realities of congressional and presidential budgeting. The VSE appeared on paper more realistic about funding, but its choices were draconian: the ISS and space shuttle were both to be sacrificed on the altar of the new program. The earlier SEI died quickly, so hard choices were not required, while the VSE in the form of the Constellation Program lingers on although its effective demise appears certain. The Obama Administration prefers another approach while the new Congress is likely more hostile to big ticket discretionary spending. If the Tea Party faction in the Republican House caucus means what it says, the future for Constellation or any other similar program is a dim one.

The reality is that the Apollo program, the SEI, and the VSE are examples in space terms of the home run approach. Such efforts confront the cruel but obvious reality that the human spaceflight program is considered by the public and most of Congress to be a “nice to have,” but not a necessity when compared to other programs or national priorities. Congressional support is narrow and constituency-driven (i.e. protect local jobs), which means most in Congress only support the space program in the abstract. Big ticket items or programs are not a priority for most, given other priorities. What happens is what can be loosely termed normal politics: a situation where human spaceflight remains a low priority on the national agenda. Funding for bold new initiatives is going to be hard to come by even when the economy recovers and deficits are under control. The home run approach has run its course at least for a time; now the small ball approach becomes your mantra.

## Link – Space Based Solar Power

**The plan is a political firestorm**

**Preble 6** - President of the Space Solar Power Institute (Darel, “Introduction to the motion to the National Space Society Board of Directors,” 12/15, http://www.sspi.gatech.edu/sunsatcorpfaq.pdf)

Changing our nation and our world’s baseload energy generation sources to introduce SSP is a massive battle. The current oil, coal, and gas energy providers, nuclear as well, are not eager to see their baseload investments face competition from SSP, which has zero fuel costs and zero emissions and a billion years of steady supply projected. This is why SSP has been unfunded since it was invented in 1968. Carter pushed through the SSP reference study in 1979-1980, but space transportation costs were far too high, and they were forced to plan to use astronauts to bolt it together. This is too dangerous for astronauts outside the protection of the Van Allen Radiation Belts. (The Space Station is inside the Van Allen Belts) People are also too expensive to use for SSP construction. Telerobotics, the real way to assemble SSP, did not exist in 1979. Now it is used in heart surgery every day worldwide and for a thousand other uses. (The fossil fuel industry has battled environmentalists every inch during our struggle to understand climate change effects. That is their right. Perhaps half the studies are wrong. But half are right.) Most crucially, space transportation costs have stayed too high because there is no market large enough to support a Reusable Launch Vehicle fleet. SSP IS just such a massive market. Robert Zubrin mentions this battle and perspective in “Entering Space”, page 51. He quit space transportation and decided to work on Mars, which has no possibility of commercialization this century. This is detailed in the Space Transportation chapter on the SSPW website also. You can’t make an omelet without breaking a few eggs.

**Zero Congressional support for SPS --- its too expensive and tied to unpopular military space programs**

**Day 8** (Dwayne A., Program Officer – Space Studies Board of the National Research Council, “Knights in Shining Armor”, The Space Review, 6-9, http://www.thespacereview.com/article/1147/1)

If all this is true, why is the space activist community so excited about the NSSO study? That is not hard to understand. They all know that the economic case for space solar power is abysmal. The best estimates are that SSP will cost at least three times the cost per kilowatt hour of even relatively expensive nuclear power. But the military wants to dramatically lower the cost of delivering fuel to distant locations, which could possibly change the cost-benefit ratio. The military savior also theoretically solves some other problems for SSP advocates. One is the need for deep pockets to foot the immense development costs. The other is an institutional avatar—one of the persistent policy challenges for SSP has been the fact that responsibility for it supposedly “falls through the cracks” because neither NASA nor the Department of Energy wants responsibility. If the military takes on the SSP challenge, the mission will finally have a home.

But there’s also another factor at work: naïveté. Space activists tend to have little understanding of military space, coupled with an idealistic impression of its management compared to NASA, whom many space activists have come to despise. For instance, they fail to realize that the military space program is currently in no better shape, and in many cases worse shape, than NASA. The majority of large military space acquisition programs have experienced major problems, in many cases cost growth in excess of 100%. Although NASA has a bad public record for cost overruns, the DoD’s less-public record is far worse, and military space has a bad reputation in Congress, which would never allow such a big, expensive new program to be started.

Again, this is not to insult the fine work conducted by those who produced the NSSO space solar power study. They accomplished an impressive amount of work without any actual resources. But it is nonsensical for members of the space activist community to claim that “the military supports space solar power” based solely on a study that had no money, produced by an organization that has no clout.

DA Tradeoff

## 1NC Shell

**Funding for a new long-range bomber depends on current savings in the Air Force budget – new programs kill it**

**National Defense 10/20** (National Defense Magazine is part of NDIA—The association’s membership base consists of nearly 900 companies and 26,000 individuals from the entire spectrum of the defense and national industrial bases, from government and from foreign nations with whom the United States, through DoD, has a Memorandum of Understanding. 10/20/11, “Air Force Focuses on Turning 'Tail to Tooth' in Face of Budget Crunch”, http://www.nationaldefensemagazine.org/blog/Lists/Posts/Post.aspx?ID=565, nkj)

The Air Force will focus on modernizing its aging fleet, even as budgets decline, said the service's top civilian leader.

Since 9/11, at least 400 aircraft have been retired for the Air Force inventory, and the service has “begun to put the squeeze internally on many different support functions,” Air Force Secretary Michael B. Donley said Oct. 20 at a breakfast hosted by the National Defense University Foundation and the National Defense Industrial Association.

"Over the last 10 years or so, we have become a smaller Air Force with increasing requirements for modernization,” Donley said. “We are now the smallest Air Force since 1947.”

Donley said the Air Force will be challenged to absorb its share of DoD budget cuts — in the range of $450 billion over the next 10 years. It is "hard, but doable," he said.

The Air Force so far has shifted $33 billion “from support tail to war fighting tooth,” he said.

But Donley warned that going forward the low hanging fruit has been picked, and “there’s not much more to do.” Further savings could come from a planned audit of compensation and benefits, which total about 40 percent of defense spending.

Mainly from support and administrative pools, the Air Force’s active duty strength has been reduced since 9/11 by about 25,000, Donley said. It’s a trend that will likely continue as budget constraints are balanced against the need to upgrade weapon systems and acquire new technology.

Donley countered that the Air Force has also “made some important improvements and in many respects is more combat capable” than at any time in its history. Wartime experience and “key investments” like buying F-22 Raptors and C-17 Globemasters have offset the downsizing, he said. The force has also fielded more than 200 unmanned aircraft that fly missions in Iraq and Afghanistan.

But the Air Force’s fleet continues to age and as it becomes smaller, modernization will become more important, he said. The average age of an Air Force fighter jet is now 22 years, he said. Its bombers are on average 35 years old. Tankers average 47 years apiece, he said.

Donley declared his commitment to continued focus on buying the F-35 Joint Strike Fighter, a program that has been plagued by cost overruns and delays.

“This (aircraft) will be the backbone of the U.S. Air Force 10, 20, even 30 years from now,” he said.

Other programs on the Air Force's wish list include long-range strike capabilities, replacement of tanker aircraft and nuclear capabilities. If the nation’s nuclear arsenal is forced to downsize, preserving the triad of delivery options would “become more important,” he said.

If Congress cuts more than $450 billion from the defense budget, drastic strategic decisions will be needed, Donley said. Less funding would mean the Air Force “would have to cancel some programs and delay or defer others. But we are working through these issues and we will come out of this with the finest military in the world.”

**ALL large spending will trade off with defense spending—even if it’s not a military program**

**Knusden 11/14** (Patrick Louis Knudsen, the senior budget expert at The Heritage Foundation, learned the ins and outs of federal spending in 20 years on the staff of the Budget Committee of the U.S. House of Representatives. Knudsen holds a bachelor’s degree in English from the University of Wisconsin-Milwaukee, and earned 27 credits in the master’s program there. 11/14/11, “Spending Bills Setting Up Reckless Defense Cuts” http://blog.heritage.org/2011/11/14/spending-bills-setting-up-reckless-defense-cuts/, nkj)

Cracks in the Budget Control Act’s (BCA) spending caps are growing more visible as negotiators near completion of the first three appropriations bills for fiscal year (FY) 2012.

Unless the House changes course, appropriations could be sailing toward a breach of the BCA limits and a debilitating freeze on defense spending while still gushing “disaster” and “emergency” funds that escape the BCA boundaries entirely.

Under the agreement taking shape, House negotiators have essentially conceded to higher spending levels than those in the House-passed versions of the three spending bills—Agriculture, Commerce–Justice–Science, and Transportation–Housing and Urban Development—which are packaged together in a so-called “minibus.”

The deal would put the final total for the minibus at $127.8 billion in budget authority—roughly identical to the Senate’s recommended total for the three measures and about $5.1 billion more than the House originally proposed. In addition, the Senate bills include $3.2 billion in “disaster relief” funds that are totally exempt from the spending caps, i.e., the money spent in excess of the BCA limits.

This is because the BCA allows a formula-based amount of additional spending above the “official” BCA cap of $1.043 trillion to help remedy the effects of past weather “disasters” declared by the President. According to Administration calculations, the total of disaster funds could run as high as $11.3 billion if all the authority is used, and not a dime of it would count under the BCA limits.

The BCA also allows unlimited additional spending for future events designated as “emergencies” by Congress and the President. When coupled with the disaster loophole, this makes the BCA caps almost meaningless.

The Senate has larded its 12 appropriations bills with a total of $8.6 billion in “disaster relief” funds. House appropriators, to their credit, proposed no disaster spending. (See the Heritage Foundation Appropriations Tracker.) Nevertheless, on November 3, the House passed a procedural motion, with the support of 79 Republicans, urging minibus negotiators to insist on “the highest level of funding” for Federal Highway Administration disaster relief funding, which represents $1.9 billion of the disaster funds in the Senate bills.

The motion is not binding, but it is likely to influence House appropriators to accept at least some of the Senate’s added spending. That would be the first opening of the disaster spigot, which would then likely widen with subsequent spending measures.

Even more problematic, however, is how the path set by these first three appropriations bills could further risk military readiness with an irresponsible freeze in the defense spending bill.

House versions of the 12 regular appropriations bills total $1.04 trillion, about $3 billion below the official BCA budget authority cap for FY 2012. The distribution of funds in the House measures includes $530 billion for the defense bill, an increase of 3.3 percent over FY 2011. The Senate provides a higher total for its non-defense spending but freezes the defense bill at the 2011 level of $513 billion.

Therefore, depending on the sequence in which the appropriations are considered, each non-defense budget measure that passes at or near the higher Senate level increases the pressure on subsequent bills, including defense, to absorb deeper cuts to stay under the total BCA cap.

Negotiations on a House-Senate version of the defense budget bill have not yet been scheduled.

A defense freeze would be especially reckless now. Base defense spending has already sustained deep reductions in recent years and could face additional cuts ranging from $445 billion to $825 billion through 2021 under the existing BCA limits.

The 112th Congress did succeed earlier this year in reducing discretionary spending by 3.8 percent, but its commitment to spending restraint has started flagging. Members gave up early on aiming for the pre-stimulus 2008 spending levels, as once promised. After the House budget resolution passed, House appropriators set their spending levels to meet its total of $1.019 trillion in discretionary spending. But as soon as the BCA was agreed to, with its higher $1.043 trillion ceiling, they added on extra spending, mostly in the Labor–Health and Human Services–Education bill.

For all its faults, one virtue of the BCA is that it does call for a real spending cut of $7 billion in FY 2012 compared with 2011. The ceiling is riddled with loopholes, but appropriators do not have to exploit them. Instead, if they insist on this extra spending, they should offset any and all disaster or emergency spending with reductions elsewhere and stay under the official BCA cap.

The unacceptable alternative, which appears to be taking shape, is to keep punching holes in the BCA cap—further eroding any credibility of the debt ceiling deal—and allow irresponsible cuts in defense spending. The vote on the first minibus bill will go a long way to determining which course Congress chooses.

**Bomber solve three unique scenarios for nuclear war – allied proliferation, hostile aggression, and crisis escalation**

**Williams ‘10** (David E. Williams, Jr., Major, U.S. Air Force, career Security Forces Officer currently serving as the Chief of Nuclear Security Inspections, Defense Threat Reduction Agency, former Squadron Commander, Staff Officer, Operations Officer, Flight Commander, and Convoy Commander within the Air Force nuclear community, also a certified SWAT Team Leader, Trainer, Designated Marksman, and Crisis Negotiator, M.A. Security Studies, M.A. Counseling & Human Behavior, B.A. Psychology, “A Review of U.S. First-Strike Ambiguity and the Triad Nuclear Force,” Defense Threat Reduction University Journal, 1(2), October 2010, http://www.dtra.mil/dtru/documents/V1\_2/US%20First%20Strike%20Ambiguity%20-%20Williams.pdf)

The Case for Continuity The case for the continuity of current U.S. nuclear policies and structure involves consideration of their benefits in terms of security, international prestige, domestic politics, and technology. 8 From a security perspective, nuclear weapons ensure security because the potential usage of nuclear weapons during a conflict raises the cost of war to an unacceptable level. 9 Scott Sagan notes that: Nuclear declaratory policy is meant to enhance deterrence of potential adversaries by providing a signal of the intentions, options and proclivities of the U.S. government in different crisis and war-time scenarios. 10 I would argue, however, that an ambiguous U.S. first use policy of nuclear weapons creates valuable uncertainty on the part of potential adversaries. This uncertainty, coupled with U.S. nuclear and conventional superiority, makes overt state aggression against the U.S. or its’ allies a very uncertain and potentially disastrous proposition, thus not likely to happen. After all, no state has started a war with the U.S. since it acquired nuclear weapons. No part of the U.S. nuclear triad can be eliminated without creating an adverse impact on deterrence. This is the case because each element of the triad fills a unique role that makes U.S. nuclear forces lethal, survivable, and visible. Submarines offer the greatest degree of survivability, but the lowest degree of accuracy and become vulnerable upon surfacing. Bombers are the most accurate and only recallable option, but they are vulnerable to defensive counter-air missions and groundbased anti-aircraft fire. ICBMs are the most reliable means of delivery and the only sovereignlaunched option, yet are all located at known, stationary sites that are easily targeted by enemy ICBM forces, special operations teams, or terrorist surrogates. One may not consider the visibility of nuclear forces to be desirable, but the visibility of bombers and ICBMs allows for clear signaling to potential adversaries about U.S. intentions during a crisis. Take the Cuban Missile Crisis for example: President Kennedy used naval and air forces in order to signal his intent toward Premier Khrushchev. This signaling ensured there were no doubts about U.S. willingness to go to war to prevent Soviet missiles from being placed in Cuba. Future conflicts may require signaling of a similar nature to prevent deadly exchanges. For example, if Kim Jong Il were notified that the U.S. was uploading nuclear-armed bombers in response to North Korean deployments of nuclear-armed missiles, he might reconsider his actions. From the perspective of international prestige, other powers are retaining and in some cases enhancing their nuclear capability, yet as Younger points out, the U.S. is not modernizing any aspect of its inventory. 11 Instead, the U.S. is relying on mathematical projections and estimations regarding the reliability of its systems and deploying them well beyond what most states would consider a reasonable service-life. Further reductions in strategic nuclear forces could be seen as evidence of retrenchment on the part of the U.S. by ambitious rising or reemerging powers, thus increasing the risk of war. The U.S. could be characterized as a declining power by rising powers who are seeking either initial or enhanced nuclear technology. Rising powers, after all, will work to realign the international balance of power in their favor: one way of doing so is through countering U.S. military capabilities. If the U.S. were to reduce its capability by eliminating portions of the triad, then it would essentially be making it easier for other powers to challenge the current U.S. position. Further, without the potential threat of a nuclear first strike, U.S. allies might feel less secure about U.S. security commitments, especially in light of current troop commitments in Iraq and Afghanistan. Such insecurity has the potential to lead these allies to pursue nuclear capabilities of their own, as well as embolden hostile states to gamble on a lack of U.S. retaliation for WMD usage or conventional aggression. For example, when the U.S. considered reducing troop levels in South Korea, the government in Seoul signaled a potential shift in policy toward a nuclear capability to protect itself from possible North Korean aggression. 12 This threat resulted in very quick U.S. reassurances about troop levels and its commitment to defending South Korea

Other DAs

## DA Debris

**Space Debris managed now, increased Space Exploration and development pushes us past the point of no return.**

**Wright 7** (David, Co director and senior scientist with the global security program of the Union of Concerned Scientists in Cambridge, Massachusetts, “Space Debris,” Physics Today, http://physicstoday.org/journals/doc/PHTOAD-ft/vol\_60/iss\_10/35\_1.shtml?bypassSSO=1, October, CDG)

The threat to satellites The debris threat to satellites has two aspects. The first is the near-term threat due to the current or near-term debris population. The second is the long-term evolution of the space environment as the debris population increases over the next few centuries due to the continuing release of debris from ongoing space activities and to breakups of large objects that are already in space. In the near term, the density of debris large enough to cause serious damage to satellites is sufficiently low that the risk of a damaging collision over the operational lifetime of a satellite is small. However, at some altitudes the risk is approaching the level of risk from other problems that may affect the operation of a satellite. If the debris density increases significantly, the probability of damage from debris could become the primary threat to satellites in some parts of space. Although the debris risk to satellites is relatively low, such collisions have taken place. In 1996 the French military satellite Cerise had its stabilization arm severed by a briefcase-sized piece of an Ariane rocket. Debris collisions with inactive satellites have also been seen. In 1991 the defunct Russian Cosmos 1934 satellite was hit by a piece of debris from the Cosmos 926 satellite.7 Orbital changes of the NOAA 7 satellite in 1997 and the Cosmos 539 satellite in 2002, accompanied by the release of small amounts of debris, are believed to have been caused by collisions with debris in the 1- to 10-cm range.8 And in January 2005 a fragment from a Chinese rocket body that exploded in March 2000 struck a 31-year-old US rocket body. A number of additional events, including satellite breakups and malfunctions of unknown cause, may have been due to debris that was too small to be tracked. With the current number of satellites and debris, hundreds of close approaches, in which the objects pass within less than one kilometer of each other, occur every day between cataloged objects.9 Since the distribution of debris is not uniform in space, the threat to a satellite depends on its orbit. And the regions most heavily used by satellites are also the most heavily populated with debris. Before China's ASAT test in January 2007, the average time between collisions of two large, cataloged objects in LEO was estimated to be 11–12 years.10 As noted above, three such events have been identified historically—in 1991, 1996, and 2005—a rate that is roughly consistent with that average. (The collision rate was much lower in the first few decades of the space age.) A "catastrophic" collision—one that causes the objects to completely fragment into debris—was estimated to take place every 19 years. For the coming decades, the debris from the Chinese test is expected to increase the collision rate to one roughly every 7–8 years, with a catastrophic collision every 12–14 years. A more relevant measure of risk is that before the Chinese test, a piece of debris larger than 1 cm was estimated to collide with one of the active satellites in LEO every 5–6 years. Such collisions can cause significant damage to a satellite but may not cause it to malfunction. And attributing a satellite malfunction to debris may be difficult because much of the debris is too small to be observed by the SSN. The debris from the Chinese test is expected to increase the malfunction probability by more than 50%, so a collision of this kind would be expected roughly every 3–4 years during the next decade. Another measure of the current debris risk is that in the heavily used altitude band around 800–900 km, the chance that any given satellite will be hit by debris larger than 1 cm is approaching 1% over the satellite's 5- to 10-year lifetime. Since debris from the Chinese test is concentrated near that altitude band, it will roughly double the threat for the next 5–10 years. Long-term evolution If the debris density becomes large enough at some altitudes, those regions of space can become "supercritical," meaning that collisions between objects are frequent enough that they produce additional debris faster than atmospheric drag removes debris from the region. The additional particles further increase the collision probability in the region, which leads to a slow-motion chain reaction or cascade as the large objects in orbit are ground into smaller fragments. That situation is sometimes called the Kessler syndrome after Donald Kessler, who studied the possibility.11 A study released by NASA's Orbital Debris Program Office in 2006, before the Chinese test, showed that parts of space have already reached supercritical debris densities.12 In particular, the study shows that in the heavily used altitude band from 900 to 1000 km, the number of debris fragments larger than 10 cm is expected to more than triple over the next 200 years, even assuming no additional objects are launched into the band. The study estimates that the total population of large debris in LEO will increase by nearly 40% during that time, still under the assumption of no additional launches. The debris from the Chinese test will make matters worse. An important implication of the study is that while mitigation efforts are important for slowing the increases, only debris-remediation measures such as removing large, massive objects already in orbit can hope to prevent their consequences. Remediation efforts such as robotic missions to remove defunct satellites and rocket stages are very expensive, but are being studied.

**We are at critical mass – continued increases in space debris eliminate the possibility of future space exploration and development**

**SENECHAL 07** (Thierry, Policy Manager of the Commission on Banking Technique and Practice at the International Chamber of Commerce and holds degrees in economics and finance from Harvard University, London Business School, and Columbia University, Space Debris Pollution: A conventional proposal, 2007, <http://www.pon.org/downloads/ien16.2.Senechal.pdf>)

The time is right for addressing the problem posed by orbital debris and realizing that, if we fail to do so, there will be an increasing risk to continued reliable use of space-based services and operations as well as to the safety of persons and property in space. We have reached a critical threshold at which the density of debris at certain altitudes is high enough to guarantee collisions, thus resulting in increased fragments. In a scenario in which space launches are more frequent, it is likely that we will create a self-sustaining, semi-permanent cloud of orbital ―pollution‖ that threatens all future commercial and exploration activities within certain altitude ranges. The debris and the liability it may cause may also poison relations between major powers.

**Space debris increases the risk of strikes on Russian early-warning satellites, resulting in an accidental global nuclear war**

**Lewis ‘04** (Jeffrey, Postdoctoral Fellow in the Advanced Methods of Cooperative Study Program, Worked In the Office of the Undersecretary of Defense for Policy, Center for Defense Information, What if Space Were Weaponized? July, <http://www.cdi.org/PDFs/scenarios.pdf>)

This is the second of two scenarios that consider how U.S. space weapons might create incentives for America’s opponents to behave in dangerous ways. The previous scenario looked at the systemic risk of accidents that could arise from keeping nuclear weapons on high alert to guard against a space weapons attack. This section focuses on the risk that a single accident in space, such as a piece of space debris striking a Russian early-warning satellite, might be the catalyst for an accidental nuclear war. As we have noted in an earlier section, the United States canceled its own ASAT program in the 1980s over concerns that the deployment of these weapons might be deeply destabilizing. For all the talk about a “new relationship” between the United States and Russia, both sides retain thousands of nuclear forces on alert and configured to fight a nuclear war. When briefed about the size and status of U.S. nuclear forces, President George W. Bush reportedly asked “What do we need all these weapons for?”43 The answer, as it was during the Cold War, is that the forces remain on alert to conduct a number of possible contingencies, including a nuclear strike against Russia. This fact, of course, is not lost on the Russian leadership, which has been increasing its reliance on nuclear weapons to compensate for the country’s declining military might. In the mid-1990s, Russia dropped its pledge to refrain from the “first use” of nuclear weapons and conducted a series of exercises in which Russian nuclear forces prepared to use nuclear weapons to repel a NATO invasion. In October 2003, Russian Defense Minister Sergei Ivanov reiter- ated that Moscow might use nuclear weapons “preemptively” in any number of contingencies, including a NATO attack.44 So, it remains business as usual with U.S. and Russian nuclear forces. And business as usual includes the occasional false alarm of a nuclear attack. There have been several of these incidents over the years. In September 1983, as a relatively new Soviet early-warning satellite moved into position to monitor U.S. missile fields in North Dakota, the sun lined up in just such a way as to fool the Russian satellite into reporting that half a dozen U.S. missiles had been launched at the Soviet Union. Perhaps mindful that a brand new satellite might malfunction, the officer in charge of the command center that monitored data from the early-warning satellites refused to pass the alert to his superiors. He reportedly explained his caution by saying: “When people start a war, they don’t start it with only five missiles. You can do little damage with just five missiles.”45 In January 1995, Norwegian scientists launched a sounding rocket on a trajectory similar to one that a U.S. Trident missile might take if it were launched to blind Russian radars with a high26 What if Space Were Weaponized? altitude nuclear detonation. The incident was apparently serious enough that, the next day, Russian President Boris Yeltsin stated that he had activated his “nuclear football” a device that allows the Russian president to communicate with his military advisors and review his options for launching his arsenal. In this case, the Russian early-warning satellites could clearly see that no attack was under way and the crisis passed without incident.46 In both cases, Russian observers were confident that what appeared to be a “small” attack was not a fragmentary picture of a much larger one. In the case of the Norwegian sounding rocket, space-based sensors played a crucial role in assuring the Russian leadership that it was not under attack. The Russian command system, however, is no longer able to provide such reliable, early warning. The dissolution of the Soviet Union cost Moscow several radar stations in newly independent states, creating “attack corridors” through which Moscow could not see an attack launched by U.S. nuclear submarines.47 Further, Russia’s constellation of early-warning satellites has been allowed to decline only one or two of the six satellites remain operational, leaving Russia with early warning for only six hours a day. Russia is attempting to reconstitute its constellation of early-warning satellites, with several launches planned in the next few years. But Russia will still have limited warning and will depend heavily on its space-based systems to provide warning of an American attack.48 As the previous section explained, the Pentagon is contemplating military missions in space that will improve U.S. ability to cripple Russian nuclear forces in a crisis before they can execute an attack on the United States. Anti-satellite weapons, in this scenario, would blind Russian reconnaissance and warning satellites and knock out communications satellites. Such strikes might be the prelude to a full-scale attack, or a limited effort, as attempted in a war game at Schriever Air Force Base, to conduct “early deterrence strikes” to signal U.S. resolve and control escalation.49 By 2010, the United States may, in fact, have an arsenal of ASATs (perhaps even on orbit 24/7) ready to conduct these kinds of missions – to coerce opponents and, if necessary, support preemptive attacks. Moscow would certainly have to worry that these ASATs could be used in conjunction with other space-enabled systems – for example, long-range strike systems that could attack targets in less than 90 minutes – to disable Russia’s nuclear deterrent before the Rus- sian leadership understood what was going on. What would happen if a piece of space debris were to disable a Russian early-warning satellite under these conditions? Could the Russian military distinguish between an accident in space and the first phase of a U.S. attack? Most Russian early-warning satellites are in elliptical Molniya orbits (a few are in GEO) and thus difficult to attack from the ground or air. At a minimum, Moscow would probably have some tactical warning of such a suspicious launch, but given the sorry state of Russia’s warning, optical imaging and signals intelligence satellites there is reason to ask the question. Further, the advent of U.S. on-orbit ASATs, as now envisioned could make both the more difficult orbital plane and any warning systems moot. The unpleasant truth is that the Russians likely would have to make a judgment call. No state has the ability to definitively deter- mine the cause of the satellite’s failure. Even the United States does not maintain (nor is it likely to have in place by 2010) a sophisticated space surveillance system that would allow it to distinguish between a satellite malfunction, a debris strike or a deliberate attack – and Russian space surveillance capabilities are much more limited by comparison. Even the risk assessments for collision with debris are speculative, particularly for the unique orbits in which Russian early-warning satellites operate. During peacetime, it is easy to imagine that the Russians would conclude that the loss of a satellite was either a malfunction or a debris strike. But how confident could U.S. planners be that the Russians would be so calm if the accident in space occurred in tandem with a second false alarm, or occurred during the middle of a crisis? What might happen if the debris strike occurred shortly after a false alarm showing a missile launch? False alarms are appallingly common – according to information obtained under the Freedom of Information Act, the U.S.-Canadian North American Aerospace Defense Command (NORAD) experienced 1,172 “moderately serious” false alarms between 1977 and 1983 – an average of almost three false alarms per week. Comparable information is not available about the Russian system, but there is no reason to believe that it is any more reliable.51 Assessing the likelihood of these sorts of co- incidences is difficult because Russia has never provided data about the frequency or duration of false alarms; nor indicated how seriously early- warning data is taken by Russian leaders. More- over, there is no reliable estimate of the debris risk for Russian satellites in highly elliptical orbits.52 The important point, however, is that such a coincidence would only appear suspicious if the United States were in the business of disabling satellites – in other words, there is much less risk if Washington does not develop ASATs. The loss of an early-warning satellite could look rather ominous if it occurred during a period of major tension in the relationship. While NATO no longer sees Russia as much of a threat, the same cannot be said of the converse. Despite the warm talk, Russian leaders remain wary of NATO expansion, particularly the effect expansion may have on the Baltic port of Kaliningrad. Although part of Russia, Kaliningrad is separated from the rest of Russia by Lithuania and Poland. Russia has already complained about its decreasing lack of access to the port, particularly the uncooperative attitude of the Lithuanian govern- ment.53 News reports suggest that an edgy Russia may have moved tactical nuclear weapons into the enclave.54 If the Lithuanian government were to close access to Kaliningrad in a fit of pique, this would trigger a major crisis between NATO and Russia. Under these circumstances, the loss of an early-warning satellite would be extremely suspicious. It is any military’s nature during a crisis to interpret events in their worst-case light. For ex- ample, consider the coincidences that occurred in early September 1956, during the extraordinarily tense period in international relations marked by the Suez Crisis and Hungarian uprising.55 On one evening the White House received messages indicating: 1. the Turkish Air Force had gone on alert in response to unidentified aircraft penetrating its airspace; 2. one hundred Soviet MiG-15s were flying over Syria; 3. a British Canberra bomber had been shot down over Syria, most likely by a MiG; and 4. The Russian fleet was moving through the Dardanelles. Gen. Andrew Accidental Nuclear War Scenarios 27 28 What if Space Were Weaponized? Goodpaster was reported to have worried that the confluence of events “might trigger off ... the NATO operations plan” that called for a nuclear strike on the Soviet Union. Yet, all of these reports were false. The “jets” over Turkey were a flock of swans; the Soviet MiGs over Syria were a smaller, routine escort returning the president from a state visit to Moscow; the bomber crashed due to mechanical difficulties; and the Soviet fleet was beginning long-scheduled exercises. In an important sense, these were not “coincidences” but rather different manifestations of a common failure – human error resulting from extreme tension of an international crisis. As one author noted, “The detection and misinterpretation of these events, against the context of world tensions from Hungary and Suez, was the first major example of how the size and complexity of worldwide electronic warning systems could, at certain critical times, create momentum of its own.” Perhaps most worrisome, the United States might be blithely unaware of the degree to which the Russians were concerned about its actions and inadvertently escalate a crisis. During the early 1980s, the Soviet Union suffered a major “war scare” during which time its leadership concluded that bilateral relations were rapidly declining. This war scare was driven in part by the rhetoric of the Reagan administration, fortified by the selective reading of intelligence. During this period, NATO conducted a major command post exercise, Able Archer, that caused some elements of the Soviet military to raise their alert status. American officials were stunned to learn, after the fact, that the Kremlin had been acutely nervous about an American first strike during this period.56 All of these incidents have a common theme – that confidence is often the difference between war and peace. In times of crisis, false alarms can have a momentum of their own. As in the second scenario in this monograph, the lesson is that commanders rely on the steady flow of reliable information. When that information flow is disrupted – whether by a deliberate attack or an accident – confidence collapses and the result is panic and escalation. Introducing ASAT weapons into this mix is all the more dangerous, because such weapons target the elements of the command system that keep leaders aware, informed and in control. As a result, the mere presence of such weapons is corrosive to the confidence that allows national nuclear forces to operate safely.

## DA GEO – SPS Specific

**Solar power satellites will be placed in geosynchronous orbit**

**Mankins 8**—President of Artemis Innovation Management Solutions LLC, degrees in physics and public policy (John, Spring 2008, Ad Astra, “Space-Based Solar Power,” http://www.nss.org/adastra/AdAstra-SBSP-2008.pdf, RBatra)

Enter the four-decade-old concept of space solar power (SSP). Originally invented in 1968 by Dr. Peter Glaser of Arthur D. Little, and last validated in 2003 by the National Academy of Sciences' National Research Council (NRC), SSP is a simple concept analogous to the hydroelectric dam as an energy-collection device. The traditional SSP architecture utilizes very large (kilometer-scale) photovoltaic arrays in geosynchronous Earth orbit (GEO) to convert a continuous stream of intense solar radiation into carbon-neutral electrical energy, which is then transmitted 24/7 through night and weather via microwave beams to collection rectennas on Earth's surface. In honor of its inventor, these space solar power satellites are sometimes fondly called, "Glasers." Total calculated end-to-end system efficiency for base-load power approaches 10 percent--remarkably high for any known natural or artificial energy production scheme. Variations on the basic concept include using solar dynamic versus photovoltaic collection systems, optical wavelength versus microwave power transmission, lunar versus orbital basing, and low-Earth orbit versus GEO architectures. Despite their differences, all systems share a common philosophy with the hydroelectric power model: invest in a high-capital infrastructure expense up front to then enable decades of clean, reliable, low-maintenance and low unit-cost energy collection, free from the volatile fuel expenses and vulnerabilities of conventional energy systems.

**SPS would occupy a lot of the available GEO space**

**NRC 81**—National Research Council (1981, National Academy Press, “Electric Power from Orbit: A Critique of a Satellite Power System,” http://www.nss.org/settlement/ssp/library/1981NRC-ElectricPowerFromOrbit-1.Report.pdf)

There are at least six reasons to believe that an SPS would be a uniquely large user of both the electromagnetic spectrum and orbital space, and would therefore produce severe problems of compatibility with other types of satellite system. The number (60) of reference SPS satellites postulated for U.S. use is considerably more than the number now used in GEO for any other single service. Sixty SPS satellites would at least double the number of geosynchronous satellites of all types currently active or planned for the longitude sector appropriate the United States. The power radiated by each reference system satellite would be some 30 million times larger than that now radiated from any other single geosynchronous satellite. The directivity of each reference system transmitting antenna would be some 10,000 times greater than that of any other geosynchronous satellite now operating at frequencies of 1000 MHz to 5000 MHz. The combination of high radiated power and high antenna directivity would mean that the intensity of the main beam would be more than a hundred billion times greater for a single SPS satellite than for any other geosynchronous satellite operating near this frequency. Each reference SPS satellite would be more than 100,000 times larger in cross-sectional area than any other current or envisioned geosynchronous satellite. It would therefore be a much greater potential source of scattered electromagnetic radiation (including sunlight)and a much larger radiator of thermal radio waves than other satellites. An SPS might also become a major source of interference outside of its own frequency band (produced by the nonlinear mixing of the SPS carrier frequency with other electromagnetic signals) because of the large amount of power radiated, the variety of materials used, and the huge size of the SPS satellite and rectennas we therefore conclude that: An SPS is likely to preclude use by other satellites of a significant fraction of the limited geosynchronous orbit and associated electromagnetic spectrum resources. Hence, obtaining international acceptance of a purely U.S. SPS is likely to be difficult not only in the administrative sense but also in the broader context of political decisions.

**That causes space miscalculation**

**Klotz 99** - Commander, Air Force Global Strike Command Frank G. Klotz, Jan 1999, Space, Commerce, and National Security, Council on Foreign Relations, p.23-4

The scramble for geosynchronous slots and frequency allocations may in fact intensify as even more telecommunications satellites are launched and space becomes even more "crowded." For the most part, the ITU has resolved most conflicts. Nevertheless, the occasional breakdowns in the process for managing and regulating this competition give pause for concern. Interference--inadvertent or deliberate--could in fact pose a more immediate threat to U.S. military and commercial interests than any nascent capability on the part of potential adversaries to deliberately attack American space systems in crisis or conflict. The possible interruption of the GPS signal by commercial communications satellites-with all its implications for military operations and the global information infrastructure-is a case in point.

**Space war causes extinction**

**Mitchell et al. 1** -Associate Professor of Communication and Director of Debate at the University of Pittsburgh (Dr. Gordon, ISIS Briefing on Ballistic Missile Defence, “Missile Defence: Trans-Atlantic Diplomacy at a Crossroads”, No. 6 July, http://www.isisuk.demon.co.uk/0811/isis/uk/bmd/no6.html)

A buildup of space weapons might begin with noble intentions of 'peace through strength' deterrence, but this rationale glosses over the tendency that '… the presence of space weapons…will result in the increased likelihood of their use'.33 This drift toward usage is strengthened by a strategic fact elucidated by Frank Barnaby: when it comes to arming the heavens, 'anti-ballistic missiles and anti-satellite warfare technologies go hand-in-hand'.34 The interlocking nature of offense and defense in military space technology stems from the inherent 'dual capability' of spaceborne weapon components. As Marc Vidricaire, Delegation of Canada to the UN Conference on Disarmament, explains: 'If you want to intercept something in space, you could use the same capability to target something on land'. 35 To the extent that ballistic missile interceptors based in space can knock out enemy missiles in mid-flight, such interceptors can also be used as orbiting 'Death Stars', capable of sending munitions hurtling through the Earth's atmosphere. The dizzying speed of space warfare would introduce intense 'use or lose' pressure into strategic calculations, with the spectre of split-second attacks creating incentives to rig orbiting Death Stars with automated 'hair trigger' devices. In theory, this automation would enhance survivability of vulnerable space weapon platforms. However, by taking the decision to commit violence out of human hands and endowing computers with authority to make war, military planners could sow insidious seeds of accidental conflict. Yale sociologist Charles Perrow has analyzed 'complexly interactive, tightly coupled' industrial systems such as space weapons, which have many sophisticated components that all depend on each other's flawless performance. According to Perrow, this interlocking complexity makes it impossible to foresee all the different ways such systems could fail. As Perrow explains, '[t]he odd term "normal accident" is meant to signal that, given the system characteristics, multiple and unexpected interactions of failures are inevitable'.36 Deployment of space weapons with pre-delegated authority to fire death rays or unleash killer projectiles would likely make war itself inevitable, given the susceptibility of such systems to 'normal accidents'. It is chilling to contemplate the possible effects of a space war. According to retired Lt. Col. Robert M. Bowman, 'even a tiny projectile reentering from space strikes the earth with such high velocity that it can do enormous damage — even more than would be done by a nuclear weapon of the same size!'. 37 In the same Star Wars technology touted as a quintessential tool of peace, defence analyst David Langford sees one of the most destabilizing offensive weapons ever conceived: 'One imagines dead cities of microwave-grilled people'.38 Given this unique potential for destruction, it is not hard to imagine that any nation subjected to space weapon attack would retaliate with maximum force, including use of nuclear, biological, and/or chemical weapons. An accidental war sparked by a computer glitch in space could plunge the world into the most destructive military conflict ever seen.

## DA Signals – SPS Specific

**SPS signals interfere with astronomical detection**

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(Takeshi, Kenji, and Makoto, “Solar Power Satellite Interference Assessment,” http://ieeexplore.ieee.org/xpl/freeabs\_all.jsp?arnumber=1145677)

The second harmonics fall in the frequency band used by radio astronomy (RA). The interference level of this band is defined in ITU-R RA.769-1 as −207 dBW. Although the allocated frequency to RA is slightly different from the second harmonic frequency, spurious emission to the RA band would still be harmful. Although it is not clear for the spurious level, in Table 5 we estimate the interference level, neglecting the frequency difference or assuming the second harmonic is in the RA band—this is the worst case. However, the interference level is very serious, and all mitigation techniques should be applied to reduce possible interference. Further, the spurious and out-of-band (OOB) noise emission from the high-power transmitter is likely to interfere with adjacent RA bands. In addition, energy-dispersal techniques of the SPS spectrum might increase OOB emissions if effective mitigation techniques are not adopted. Frequency selection of the SPS should avoid giving such a detrimental interference to RA services that operate very sensitive passive systems. Even so, the spurious emission must be suppressed as low as possible, and the location of the rectenna needs to be set far from RA observing sites. Since RA is fully passive, and celestial objects have no lower limit in intensity of emission, the observing system has been improved to become extremely sensitive. In fact, the GSO area was surveyed to detect some GSO satellites, as shown in Figure 5. Arrows indicate GSO satellites, probably for broadcasting at Ku band (12-GHz bands). In addition to point-like celestial radio sources and diffuse emission, mainly from our Milky Way Galaxy, spurious emissions from GSO satellites are strongly received. This causes serious interference when RA observations are conducted in these areas. If GSO satellites radiate spurious emission like that in Figure 5, the celestial equator is sufficiently infected to make RA observations impossible along it. The GSO area extends widely in the sky. The reference system postulated by NASA in 1977 consisted of 60 SPSs, each generating 6.7 GW. It should be noted that for the 60-satellite system, the black-body, thermal radiation from the GSO satellites would be a problem, even with the system totally deactivated in RA and infrared astronomy [12]. Optical astronomy could be affected by the reflection of sunlight from the enormous solar-paddle area. The need to keep the area clear for RA and astronomy of other frequency regimes cannot be overstated. Otherwise, we might effectively render useless an irreplaceable tool to investigate our universe.

**The impact is extinction**

**Jones 8**—scientist, author, pilot, and former NASA astronaut, he holds a doctorate in planetary sciences, and in more than eleven years with NASA, flew on four space shuttle missions to Earth orbit (Thomas, “Asteroid detection: Planning for the inevitable,” October, Lexis Nexis)

At least we are looking: New wide-field telescopes with advanced instrumentation, capable of searching large swaths of the sky for faint objects, promise large improvements in our near-Earth object detection capabilities. One of these new systems is Pan-STARRS (Panoramic Survey Telescope and Rapid Response System), whose prototype element is now operating on Haleakala in Hawaii. When complete, Pan-STARRS will have 3-16 times the collecting power of current NEO survey telescopes. Using a massive array of state-of-the-art CCD detectors in the focal plane, it will detect objects 100 times fainter than those currently found by NEO surveys. Pan-STARRS should quickly complete a search, as directed by Congress in 1998, for 1-km (and larger) NEOs and will be able to find 99% of those objects bigger than 300 m across. Another planned system is LSST, the Large Synoptic Survey Telescope, to be sited in northern Chile. Beginning in 2014, the 8.4-m telescope will scan the entire visible sky every three nights using a 3.2-billion-pixel CCD camera the size of a small car. The LSST will be able to find 90% of the near-Earth asteroid population 140 m and larger within about a dozen years--close to what Congress directed NASA to do in 2005 (a search program still unfunded). The Gates Foundation earlier this year put $30 million toward the telescope's construction, and the University of Arizona has just completed casting the main mirror. Over the next 15 years, these NEO search systems will lead to the discovery of over 500,000 asteroids, large and small, in the inner solar system. Of these, several thousand will be categorized as potentially hazardous asteroids, or PHAs, defined as objects that come within 0.05 astronomical units of the Earth (about 7.48 million km) and measure at least 150 m in diameter. As of August, there were 211 known PHAs, and 140 of those were larger than 1 km--capable of causing global devastation. By 2020, we may be staring at a PHA catalog that numbers more than 5,000!