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# 1NC Frontline-Leadership Advantage

## **1. Constellation not key to space leadership**

Anatoly **Zak**, contributing editor for Astronomy and Cosmonautics series of Moscow Polytech Society, **10**

“End of Constellation: It is not all doom and gloom”, 4 February 2010, [http://www.russianspaceweb.com/sei\\_end.html](http://www.russianspaceweb.com/sei_end.html), [Zheng]

Even before the White House made a proposal on Feb. 1, 2010, to eliminate funding for the Constellation program, a political hurricane had started brewing in Washington, D.C. Critics alleged that the end of the project, which aimed to return the American astronauts to the Moon, would undermine US space efforts and would even mark the end of the nation's leadership in space, giving the upper hand to evil powers like China and Russia. The criticism is probably leveled by the same people, who six years ago were blindly cheerleading the Bush administration's shortsighted decision to start this project in the first place, without any solid fiscal or technical foundation. With a minimum foresight and the knowledge of space exploration history, it was clear from the get go that the Bush plan was underfunded, poorly designed and would have to be scrapped sooner or later. It is just unfortunate that it took six years, nine billion dollars and the change of occupant in the Oval Office to come to this realization. Obviously, for every space enthusiast around the world, it would be sad to see any major space exploration effort to be axed in a budget crunch. The frustration of legislators representing congressional districts with heavy involvement into a discontinued federal project is also understandable. However there is a silver lining. Every failure presents a new opportunity and even more so does the inevitable demise of the Constellation program. NASA still can make it right, make it big, and remain a leader in space, if it chooses to do so. First of all, the Obama administration promised to increase overall NASA funding, which along with recovering economy, puts the US space agency in a very strong position for drawing up an aggressive future strategy in space. The goal of going to the Moon itself has not been abandoned but only postponed, likely for a historically insignificant period of time. In the meantime, NASA and all its international partners will be able to send their astronauts to the International Space Station, ISS, to conduct scientific research and built foundation for human ventures beyond the Earth orbit. The fact that US astronauts will temporarily fly to the ISS onboard Russian spacecraft, should bother no one but isolationists and nationalists. It is much more tragic that under funding restraints of the Constellation program, a brand-new space station -- the largest and most complex man-made structure in orbit -- would have to be dumped into the ocean as soon as 2015. Perhaps, it still would not be the most unprecedented waste of taxpayers' money in the history of space program -- just ask the developers of the Soviet N1 moon rocket and the Energia-Buran system. (Both were abandoned practically on the launch pad, after years of colossal efforts.) Beyond the station Before the end of this decade, NASA would have a new manned spacecraft, capable of reaching the ISS and, most likely, the same vehicle would be easily adaptable for lunar missions. Although the potential of the so-called “private sector” to build better, cheaper spacecraft is greatly over-hyped, there is little doubt that the US aerospace industry would be fully capable of building a state-of-the-art spacecraft for the federal government. Hysterical cries in the American press about the loss of US capability to launch astronauts into space are completely unfounded. In the end, it will be the decision of the American public and the US Congress on the ultimate goal of the manned space program after 2020. If the US economy grows and the federal budget can be balanced, many ambitious projects in space exploration, including a lunar base, missions to asteroids and expeditions to Mars would become possible by 2030. Unlike the Constellation, which was intentionally set up to be an “in-house” program, the future efforts to explore deep space should include a broad international cooperation with Russia, China, Europe and other countries. No longer mandated to exclude foreign partners, NASA can return to the negotiation table with other space agencies and formulate a common approach toward future goals. Based on recommendations of the Augustine Committee last year, NASA can allow foreign partners into the so-called “critical path” in future cooperative projects, meaning that their goals would not be achievable without hardware and support of other countries. While it may or may not cut cost of the whole enterprise, it would certainly give space program an important political clout. Interdependency in space as well as on Earth would help to ensure that governments make a habit of finding common solutions to international problems at the negotiation table. As a first possible step to manned exploration of deep space, Roskosmos have proposed to convert the Russian segment of the International Space Station into an assembly platform for planetary ships. European Space Agency expressed interest in the idea and NASA might consider taking them up on that offer. Yet, another space station might be required in the lunar orbit, along with manned and cargo transports, landers and launch vehicles. For future projects, space agencies could contribute and barter various hardware and services for common goals of reaching the Moon and Mars. In other situations, two or more parallel systems, such as transport lines, could be set up, to provide redundancy for the lunar base or a Martian expedition, even in case of a major failure in one of the systems. However all of this is in the future, while now, the US government has to quickly draft a new strategy for this decade. Due to the enormous influence NASA activities exert on other space agencies, first of all on Roskosmos and ESA, it would be critically important for Washington to demonstrate that the US is still committed to a robust manned space program. Well defined deadlines and budgets should demonstrate to contractors and international partners alike that they have little time to spare in preparing for the next page in the history of the manned space program. To ensure it is happening, Russia, China and India will provide an additional incentive.

## **2. Constellation was replaced by Obama with more effective exploration plans --- boosting leadership**

**Mace 11** (Frank, "In Defense of the Obama Space Exploration Plan", Harvard Political Review, 4-7, <http://hpronline.org/united-states/in-defense-of-the-obama-space-exploration-plan/>)

Finally, Obama's plan deftly prioritizes national inspiration over simple nationalism. He argues "exploration will once more inspire wonder in a new generation—sparking passions and launching careers . . . because, ultimately, if we fail to press forward in the pursuit of discovery, we are ceding our future and we are ceding that essential element of the American character." And this plan is not lacking in inspiration capability. It calls for innovation to build a rocket at least two years earlier than under the Constellation program. This point alone negates the three astronauts' criticism that many years will be "required to recreate the equivalent of what we will have discarded." Crewed missions into deep space by 2025. Crewed missions to asteroids. Crewed missions into Mars orbit by the 2030s. A landing on Mars to follow. This plan will truly continue NASA's history of inspiring the people, especially the youth, of the United States.

Armstrong, Lovell, and Cernon assert that the Obama plan will sacrifice American leadership in space.

Worthy recipients of the status of national hero, these astronauts nonetheless hail from the space race era. Obama, however, points out that "what was once a global competition has long since become a global collaboration." I agree with the president that the ambitious nature of his plan will do nothing but "ensure that our leadership in space is even stronger in this new century than it was in the last" as well as "strengthen America's leadership here on earth."

Obama's space exploration plan will create jobs, advance science, and inspire a nation, and it will do so not by sacrificing American dominance in space, but by extending that dominance into new areas of research and exploration.

## **3. Increasing human spaceflight shortchanges existing cooperation – undermines leadership**

Vincent G. **Sabathier** and Ryan **Faith '6** - Vincent G. Sabathier is a senior fellow and director of the Human Space Exploration Initiative at the Center for Strategic and International Studies (CSIS) in Washington, D.C, a senior associate with the CSIS Technology and Public Policy Program, from 2004-2009 he was senior fellow and director for space initiatives at CSIS. He is also senior adviser to the SAFRAN group and consults internationally on aerospace and telecommunications. Ryan Faith is program manager for the Human Space Exploration Initiative at CSIS. "U.S. Leadership, International Cooperation, and Space Exploration" 4/26 Published by the CSIS [csis.org/files/media/isis/pubs/060426\\_us\\_space\\_leadership.pdf](http://csis.org/files/media/isis/pubs/060426_us_space_leadership.pdf)

The future of international space exploration is at a turning point as is U.S. leadership.

Space exploration has always been very complex on many levels. On the national front, one has been confronted with the political, diplomatic, budgetary, and technical swings and compromises that govern any national space program. Activities in space also lie in the middle of strategic and foreign policy considerations.

As NASA has already had to sacrifice its image as a technology innovator to pursue exploration, it is understandable that it does not want to be further constrained by foreign policy requirements. Exploration, however, demands leadership, which in turn is dependent on foreign policy considerations. But one could argue that exploration in a difficult budget environment would cannibalize both the International Space Station (ISS) and science programs, two areas in which most of the collaborative efforts today are taking place. Such an approach will result in a critical loss of U.S. leadership. Therefore, the current mindset, articulated by the expressions "If we build it, they will follow" and "Forget diplomacy, let's go back to the moon," is closer to isolationism than to leadership. In other words, a quarterback by himself isn't an entire football team.

## **4. Constellation won't restore space leadership.**

**Handberg, Professor and Chair of the Department of Political Science at the University of Central Florida, 11** (April 25, Roger, "Post-Constellation blues", "The Space Review", <http://www.thespacereview.com/article/1620/2>)

Taking another pathway to the future is disturbing when you have a particular model of how to do human exploration in your head.

What is happening now is that the United States is being forced to adapt to a situation where it no longer dominates events at least until the United States returns to routine human spaceflight. The reality, not always understood, is that this situation would have arisen even if the Constellation program continued on its projected, albeit delayed, path. Regardless of President Obama's choices, the US confronted a new situation due to the Constellation program's failure to keep on track and on budget. Advocates ignore the reality that the bulk of Congress is not terribly driven or excited about the space program because its linkages to their constituents are not concrete and immediate. As a general proposition, most would support an American space program, but the reality is that support is not strong enough to drive them to significantly increase NASA's budget without some greater sense of where the program is going. Prematurely killing the ISS was a perplexing decision from their perspective since NASA seemed to be throwing away a generation of its work and saying, in effect, "Let's start over." The Vision for Space Exploration in one sense was a clean-sheet concept despite the obvious carry forward aspects of the Apollo program, but Congress and the American people seem reluctant to start over without first exploiting what has taken several decades to build.

## XT – Constellation Not Key

### **The constellation program is just one of many reasons that America's leadership is at risk**

W Lynn, comments at US Strategic Command Space Symposium, third November 2010,  
at <http://www.defense.gov/Speeches/Speech.aspx?SpeechID=1515>.

3. Will the USA have more influence on the world stage? 3.1. Perceptions of style\_President Obama's 2010 policy is notable for the shift over the 2006 version, which most agree to be more a stylistic change of tone, rather than one of substance. The messages conveying the need for multilateral action are likely to be welcome to external audiences' ears and suggest a more consultative approach. That said, the cancellation of the Constellation program was done without prior notice or consultation with international partners, and much of the debate on the subject has centered on the domestic repercussions of the decision, not the impact on the partners. There is evidently a mismatch between intent and such unilateralist actions. 3.2. Perceptions of reliability as a partner The president's request and congressional authorization for continued funding of the ISS's operations delivers on commitments made to international partners beginning in the mid-1980s when the program was conceived. However, without a successor system to the Shuttle, the USA has abrogated intergovernmental agreements to provide crew and cargo transportation, and crew rescue, as partial compensation for partner investments in the ISS's infrastructure and operations. Reliance on the Russian Soyuz for limited down-mass cargo transport seriously inhibits the value that can be realized from ISS utilization until a commercial solution is available. In addition, the USA's unilateral abandonment of the Moon as a near-term destination shakes partners' political support for their exploration plans, some of which were carefully premised on US intentions, and more than five years of collaborative development of lunar base plans. 3.3. Leadership The USA is a majority funder for many space programs and is a technology leader, two features which have provided sufficient motivation for partners to accept US leadership, even when unfortunately high-handed. It is a stunning failure of political will to lack a successor system to the retiring Space Shuttle, and so the US cedes leadership in human spaceflight with its inability to access the ISS independently, for itself or for its partners, until a new commercial capability has been demonstrated. The USA further relinquishes leadership when abandoning years of work on strategic planning and guidance, the evaluation of alternatives, and orchestration of diverse but important contributions that were manifested in the Global Exploration Strategy. Sudden redirections without consultation are not hallmarks of leadership and will no doubt motivate partners to do more unilateral planning and execution, at least for a while. Finally, leadership in the future is at risk: how can the USA hope to influence outcomes and protect interests – strategic, commercial, and cultural – on the Moon if it is not present?

## **XT – Obama Plan Solves Space Leadership**

### **Obama space policy maintains US leadership at lower cost.**

**Faith, 10** - independent technology consultant and Adjunct Fellow for Space Initiatives at the Center for Strategic and International Studies (April 26, G. Ryan, “President Obama’s Vision for Space Exploration (part 2)”, “The Space Review”, <http://www.thespacereview.com/article/1616/1>)

On April 15th President Obama outlined the administration’s new plan for civil space exploration in a speech at the Kennedy Space Center. This article is part 2 of an analysis of the President’s announcement. The first part of the analysis discussed the cancellation and modification of the previous crew and cargo transportation efforts and the extent to which these changes represent a fundamental shift in the US approach to civil space exploration.

President Obama’s new policy reflects the findings of the Review of US Human Space Flight Plans Committee (also known as the Augustine Committee). The Augustine Committee found that the Constellation program was over budget and behind schedule, although the extent to which this is either a result of underfunding and the normal teething pains associated high technology procurement, or is symptomatic of poor technological decisions, is beyond the scope of this article. What is clear is that interactions among the White House, Congress, the Office of Management and Budget (OMB), and NASA tightened the program’s time and cost constraints, making it ultimately unsustainable politically and programmatically. Although President Obama’s new plan represents a sharp departure from the Constellation program, begun under the previous administration, the new policy follows much of the same thinking that appears in President Bush’s 2004 Vision for Space Exploration.

President Obama’s new plan modifies President Bush’s Vision for Space Exploration (VSE) by changing the approach to crew and cargo transportation to low Earth orbit (LEO). In the previous plan, NASA was to develop its own crew transportation system, comprised of two different rockets and a crew capsule, to send astronauts to LEO, including to the International Space Station (ISS). The capsule component would be augmented over time to provide a deep space transportation capability. Simultaneously, commercial transportation capabilities would be allowed to evolve, eventually taking over responsibility for crew transportation to LEO. The plan announced by President Obama makes reliance on commercial transportation of crew to LEO the primary plan, while retaining a secondary NASA-developed crew capability by pursuing the immediate development of an “Orion-lite” lifeboat that would be launched as an unmanned vehicle but could return crew from the ISS to Earth. The Orion-lite could, in addition to being evolved for deep-space travel, also be modified to transport crew to LEO, in the event that commercial systems are not able to meet that need.

The new space exploration policy also stops development of the previously proposed heavy-lift vehicle, and delays final decisions on the design and development of a future heavy-lift vehicle until 2015. Under the previous architecture, existing equipment and designs would be evolved, leading to the development of a heavy-lift vehicle that would become operational in the latter half of this decade. In response to the growing costs and technical difficulties associated with the previous launch vehicle design, the new plan calls for several years of technology development followed by a reexamination of an exploration heavy-lift strategy. President Obama’s plan calls for the development of a number of specific space exploration technologies, in contrast to the previous approach of letting NASA’s architecture decisions drive technology development. The array of technologies mentioned in the new plan include on-orbit refueling, closed-loop life support systems, and in situ resource utilization—all of which are technologies that should, at least in the long-term, reduce the operational costs associated with maintaining a human spaceflight program.

# **1NC Frontline-Aerospace Advantage**

## **1. Constellation trades-off with private sector shuttle --- net-damages job growth**

**Mace 11** (Frank, "In Defense of the Obama Space Exploration Plan", Harvard Political Review, 4-7, <http://hpronline.org/united-states/in-defense-of-the-obama-space-exploration-plan/>)

Last April, President Obama unveiled a comprehensive overhaul of NASA's future and cancelled much of the Bush-era Constellation plan to return to the moon. Obama's plan looked to add \$6 billion to the NASA budget over the next five years, renew the focus on scientific discovery, lengthen the lifespan of the International Space Station, and most importantly, dramatically increase the role of private contractors in NASA missions. Obama rightly prioritized jobs, science, and national inspiration with his new direction for NASA.

This plan drew immediate criticism from, among others, Apollo 11 Commander Neil Armstrong, Apollo 13 Commander James Lovell, and Apollo 17 Commander Eugene Cernan, who jointly wrote in a letter to President Obama: "It appears that we will have wasted our current \$10-plus billion investment in Constellation and, equally importantly, we will have lost the many years required to recreate the equivalent of what we will have discarded. For The United States, the leading space faring nation for nearly half a century, to be without carriage to low Earth orbit and with no human exploration capability to go beyond Earth orbit for an indeterminate time into the future, destines our nation to become one second or even third rate stature." The three commanders, however, overvalue pure nationalism at the expense of the NASA roles in job creation, science, and national inspiration. In today's economic climate, our first consideration should be jobs. The Obama Plan would add 2,500 more jobs to the American economy than the Bush-era plan. Additionally, the increased private sector involvement in the space program could generate upwards of 10,000 jobs.

Conservative critics of Obama's plan should take note of this increased reliance on the private sector for innovation—after all, a belief in the efficiency of the private sector is a central Republican tenet.

## **2. Tons of alt causalities that make aerospace decline inevitable**

**Thompson 9-** (David Thompson, President of the American Institute of Aeronautics and Astronautics, "The Aerospace Workforce" 12/10/2009, <http://www.gpo.gov/fdsys/pkg/CHRG-111hhr54449/html/CHRG-111hhr54449.htm>.)

Today we focus on the impact of NASA's funding levels on the current workforce which I am particularly interested in but also on the enormous scope of the challenge facing the aerospace industry as a whole. There are many issues: A workforce approaching retirement without the opportunity to teach the next generation of scientists, engineers, technicians and program managers; a highly skilled contractor force at risk of losing their jobs as a result of the human spaceflight gap; number three, decreased opportunities for future engineers and scientists which will reduce interest in the critical STEM education fields. In a perverse way, that could only come from Washington. We are concerned about a shortage of engineers and scientists. We are concerned about attracting young, highquality students to the aerospace field. We are concerned about America losing important strategic manufacturing capabilities, and yet, we are pursuing policies that in many ways may be exacerbating these very problems.

## **3. Aerospace decline independent of unemployment- 4 other reasons**

**Deloitte 09-** ("2009 Global Aerospace & Defense Industry Performance Wrap-up." [http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us\\_ad\\_2009%20Global%20Aerospace%20Defense%20Industry%20Performance%20Wrap-up\\_051110.pdf](http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_ad_2009%20Global%20Aerospace%20Defense%20Industry%20Performance%20Wrap-up_051110.pdf))

Specific events that impacted the Industry, contributing to the lower level of relative performance, include: 1) lower revenue and negative earnings at EADS, resulting from A400M and A380 loss provisions and negative foreign exchange effects, 2) higher R&D expenses for new programs at Boeing Commercial Airplanes, 3) impairment charges and regulatory penalties at BAE Systems, and 4) significantly lower revenue and operating earnings at Textron, because of underperformance at Cessna and the Finance business. • Labor reductions were severe in the business jet sub-segment; however, the overall A&D Industry was minimally affected by layoffs, compared to other industries that saw massive job losses during 2009. The total level of global A&D employment remained constant at about 2.0 million employees in 2009, with a very modest growth of 0.2%, versus the larger S&P 500 group that contracted at a rate of 2.9%.

# **1NC Frontline-Aerospace Advantage**

## **4. Economic decline doesn't cause war- prefer consensus**

**TIR 10** Ph.D. in Political Science, University of Illinois at Urbana-Champaign and is an Associate Professor in the Department of International Affairs at the University of Georgia  
(Tir Jaroslav, The Journal of Politics, "Territorial Diversion: Diversionary Theory of War and Territorial Conflict", 2010, Volume 72: 413-425, Hopkins)

Empirical support for the economic growth rate is much weaker. The finding that poor economic performance is associated with a higher likelihood of territorial conflict initiation is significant only in Models 3–4.<sup>14</sup> The weak results are not altogether surprising given the findings from prior literature. In accordance with the insignificant relationships of Models 1–2 and 5–6, Ostrom and Job (1986), for example, note that the likelihood that a U.S. President will use force is uncertain, as the bad economy might create incentives both to divert the public's attention with a foreign adventure and to focus on solving the economic problem, thus reducing the inclination to act abroad. Similarly, Fordham (1998a, 1998b), DeRouen (1995), and Gowa (1998) find no relation between a poor economy and U.S. use of force. Furthermore, Leeds and Davis (1997) conclude that the conflict-initiating behavior of 18 industrialized democracies is unrelated to economic conditions as do Pickering and Kisangani (2005) and Russett and Oneal (2001) in global studies. In contrast and more in line with my findings of a significant relationship (in Models 3–4), Hess and Orphanides (1995), for example, argue that economic recessions are linked with forceful action by an incumbent U.S. president. Furthermore, Fordham's (2002) revision of Gowa's (1998) analysis shows some effect of a bad economy and DeRouen and Peake (2002) report that U.S. use of force diverts the public's attention from a poor economy. Among cross-national studies, Oneal and Russett (1997) report that slow growth increases the incidence of militarized disputes, as does Russett (1990)—but only for the United States; slow growth does not affect the behavior of other countries. Kisangani and Pickering (2007) report some significant associations, but they are sensitive to model specification, while Tir and Jasinski (2008) find a clearer link between economic underperformance and increased attacks on domestic ethnic minorities. While none of these works has focused on territorial diversions, my own inconsistent findings for economic growth fit well with the mixed results reported in the literature.<sup>15</sup> Hypothesis 1 thus receives strong support via the unpopularity variable but only weak support via the economic growth variable. These results suggest that embattled leaders are much more likely to respond with territorial diversions to direct signs of their unpopularity (e.g., strikes, protests, riots) than to general background conditions such as economic malaise. Presumably, protesters can be distracted via territorial diversions while fixing the economy would take a more concerted and prolonged policy effort. Bad economic conditions seem to motivate only the most serious, fatal territorial confrontations. This implies that leaders may be reserving the most high-profile and risky diversions for the times when they are the most desperate, that is when their power is threatened both by signs of discontent with their rule and by more systemic problems plaguing the country (i.e., an underperforming economy).

## XT-No Job Loss

### **No permanent job loss – cancellation sets the foundation for a stronger civilian industry**

**Rutherford 10** (Emelie, congressional reporter at Defense Daily with a graduate degree in print journalism at Boston University, “Obama Set To Sign NASA Plan That Keeps Some Constellation Aspects”, Lexis Nexis Academic)

Overall, the NASA authorization bill lawmakers sent to Obama moves away from Constellation, but keeps alive aspects of it, including Orion. The legislation calls on NASA Administrator Charles Bolden to "continue the development of a multi-purpose crew vehicle to be available as soon as practicable, and no later than for use with (a new) Space Launch System." It adds: "The vehicle shall continue to advance development of the human safety features, designs, and systems in the Orion project." In addition, for the new heavy-lift rocket, the bill calls for building on working done on Ares I and the space shuttles that are being retired. The measure says Bolden should use, "to the extent practicable," "Ares 1 components that use existing United States propulsion systems, including liquid fuel engines, external tank or tank-related capability, and solid rocket motor engines; and...associated testing facilities, either in being or under construction as of the date of enactment of this Act." Some lawmakers who previously pushed back on Obama's controversial plan to cancel Constellation and instead invest in private companies to send astronauts to low-Earth orbit applauded the new bill, which is a compromise hashed out with the White House. Those former critics include Sen. Orrin Hatch (R-Utah). More than 1,600 people were laid off at ATK and other solid-rocket-motor companies in Utah after Obama called in February for eliminating Constellation. The "book is not closed on northern Utah's storied solid rocket motor industry," Hatch said after the House passed the NASA bill. "Though we will have hurdles to face in the future, the House passage of the Senate bill builds a foundation for the future of the civilian solid rocket motor industry in Utah," Hatch said in a statement. The bill includes language creating payload requirements for the heavy lift space-launch system that would nearly ensure Utah-built solid-rocket motors are used in them, Hatch said. The newly passed legislation has been touted by both Bolden and the Aerospace Industries Association. Constellation contracts will continue with the new fiscal year, because the FY '11 NASA appropriations bill has not yet been passed, Garver said. Contracts from FY '10 cannot be terminated and new programs cannot start until that legislation is signed into law.

## **XT-Alternate Causalities to Aerospace Decline**

### **Tons of alt causes to aerospace decline- foreign competition, outsourcing, and offsets**

**Faux**, founder, and now Distinguished Fellow, at the Economic Policy Institute, **02-** (Jeff, EPI: "The Aerospace Sector as a National Asset." THIS TESTIMONY WAS GIVEN BEFORE THE COMMISSION ON THE FUTURE OF THE UNITED STATES AEROSPACE INDUSTRY. July 19, 2002.

[http://www.epi.org/publications/entry/webfeatures\\_viewpoints\\_airspace\\_natlasset/](http://www.epi.org/publications/entry/webfeatures_viewpoints_airspace_natlasset/) [JUNEJA]

Of the factors affecting our low-growth of estimates of future U.S. aerospace employment, increasing competition in world markets is by far the most significant, accounting for 41.5 percent of the change in employment, or 74,244 lost jobs between 2002 and 2010. Job losses due to import penetration of foreign engines and parts account for an additional 11.5 percent of total job losses. Together, growing foreign competition for U.S. aerospace products explains 53 percent of the expected lost jobs through 2010. Aerospace Trade, Outsourcing and Offsets The U.S. aerospace trade surplus peaked at \$41 billion in 1998 and has since fallen \$15 billion, or 37 percent, (more than 11 percent annually) (Table 5). Between 1989 and 2001 U.S. aerospace imports grew on average twice as fast as aerospace exports. While U.S. aerospace exports have been declining since their high in 1998, imports of foreign made parts and equipment continue to accelerate steadily. These trends in aerospace trade can be explained by three factors. Source: EPI analysis of Aerospace Facts and Figures (1999, 2000 and 2002) First, the U.S. aerospace industry is facing increasing competition in global markets from firms like Airbus that have been specifically developed through state supported industrial policies to be national industrial "champions." From its inception in 1970 through 1990, Airbus received government subsidies in the form of grants and soft loans totaling \$26 billion. More recently, the British, French, German and Spanish governments have spent \$4 billion in development loans on the Airbus A380, which are to be repaid with future sales revenues. The total cost of developing the A380 is estimated at \$10.7 billion. Over the long run, we can expect that the commercial sector of the aerospace industry will represent a larger share of the total market. The market share of Airbus and other European aircraft producers began to rise sharply in all significant markets after 1992. Measured by the number of aircraft, the European aerospace industry is already reaching parity with the United States. Airbus expects to provide fully 50 percent of world aircraft deliveries in 2003. Looking into the near future, Airbus may be pulling ahead of Boeing. Airbus booked 53 percent of orders for new commercial aircraft in 2001 worth \$44.7 billion, while Boeing booked \$29.6 billion. We should also note that currently Airbus is competing with Boeing in markets for small and mid-size aircraft, such as Boeing's "bread and butter" 737 line. At present, Boeing's line of 747 jumbo jets enjoy little, if any, competition at present. But Airbus is online to introduce its new A380 super-jumbo in 2006 and has already booked 97 orders. Airbus expects to sell some 1,500 A380s in the next twenty years. The competition to sell new products into this market is now fierce, and failure to keep pace with the state subsidized Airbus system will be costly. Airlines have shown preferences for amassing fleets from a single supplier in order to realize economies of scale in supply chain management and to bargain for volume pricing. By sticking to one "brand," airline managers need only deal with one set of replacement parts and its mechanics can specialize in maintaining fewer models of more similar aircraft. This means today's winner for market share Outsourcing has become more than just a way to get cheaper components and parts. In order to off-load some of the costs of research and development, U.S. firms are entering into joint partnerships with state-subsidized firms in other nations. Under such arrangements, for example, a U.S. engine producer may outsource the design of a sub-component of a new engine to a foreign aerospace company. In return for sharing some of the up-front risks associated with developing new products, the part producer gets the right to produce those engine components. While engines might represent a quarter of the cost of a new aircraft, it is just a one-time cost. But, in order to maintain safety, aircraft engines are continuously overhauled and rebuilt with replacement parts. Thus, in the life of a plane, the demand for parts far outpaces the demand for engines. Indeed, Boeing salespeople have boasted to the French airlines that their planes are more "French" than Airbus's. One measure of the impact of import penetration in the U.S. aerospace industry is the ratio of imported engines and parts to total aircraft sales (both commercial and military). As shown in Figure 1, the ratio has more than doubled from 8 percent of production in 1981 to more than 20 percent last year, and has accelerated in the past three years. This chart shows that the foreign content of U.S. aircraft is increasing dramatically. Third, foreign aerospace sales are increasingly being linked to the practice of offsets. Offsets are arrangements to transfer high-skilled jobs and valuable technologies to other countries in exchange for market access for U.S. aerospace products, and are common in both the commercial and defense aerospace sectors. For example, in exchange for purchasing U.S. aircraft, many countries require U.S. aerospace firms to produce parts of that aircraft in the purchaser's country. Offsets result in the loss of high-skill U.S. jobs and the loss of cutting-edge technologies. In some cases pose a threat to national security and aviation safety. In time, these transfers will help spawn new entries into the market for parts and components, and eventually into markets for fully integrated aircraft designs and manufactured systems.

## XT – No Permanent Job Loss

### **Aerospace stays strong through economic turbulence**

**Deloitte 09-** (“2009 Global Aerospace & Defense Industry Performance Wrap-up.” [http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us\\_ad\\_2009%20Global%20Aerospace%20Defense%20Industry%20Performance%20Wrap-up\\_051110.pdf](http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_ad_2009%20Global%20Aerospace%20Defense%20Industry%20Performance%20Wrap-up_051110.pdf) [JUNEJA])

Deloitte conducted a study of the 2009 financial performance of the Global Aerospace & Defense (A&D) Industry by evaluating the performance of 91 companies. Since revenues of companies in this study represent most of the overall A&D Industry revenue, we believe the results of our study are indicative of the A&D Industry as a whole, and use the term “Industry” throughout this report in representing our findings. Although impacted by the 2009 worldwide economic recession, the Industry has continued to demonstrate its resilience by posting stable revenue and less impactful reductions in operating earnings and operating margins compared to many industries in 2009. This is because the Industry generally relies on long term contracts not greatly impacted by shortterm economic events, an increasing requirement for global defense, security and humanitarian aid, as well as the need for increasing commercial airline travel especially in growing non-Western economies. In summary, global Industry revenue remained flat, with a modest 1.3% increase to \$635.0 billion. At the same time, operating earnings decreased 15.3% to \$47.9 billion while operating margins fell by 16.4% to 7.6%. However, were it not for the program writeoffs principally at Boeing, EADS, and BAE Systems, Industry operating earnings would have also remained essential flat. Financial performance varied by subsector and region-specific factors, impacting key metrics. Key study findings are as follows: • The global A&D Industry slowed in 2009 com to the record performance of the Industry in 2008 and several years of compounded growth. • Sales bookings (Book-to-Bill ratio) fell significantly from 1.40x in 2008 to 0.89x in 2009, a substantial 36.9% decrease, due to fewer new bookings and existing order cancellations, portending slower times ahead. • Boeing had higher sales revenue than EADS and regained its position as the world’s largest A&D Industry company, reversing its 2nd place performance in 2008. • American A&D companies in this study grew faster in 2009, at 3.2%, than European companies in this study, whose revenue fell by 2.1%. • American companies in this study were more profitable again in 2009, with operating margins of 9.3%, than European companies in this study, with operating margins of 4.6%, a reflection of the long term difficulty in rationalizing costs for the Industry in countries with higher government intervention and stricter job protection scheme.

# **1NC Frontline-Solvency**

## **1. No constellation allows for NASA innovation**

Jeffrey **Mervis** Science 5 February 2010: "U.S. Budget: Science Spared From Domestic Spending Freeze—for Now"  
<<http://www.sciencemag.org/content/327/5966/628.full>>

The budget also takes a new view of human space exploration. The president has proposed a major reshuffling that turns the agency away from a program launched by President George W. Bush that was to have returned humans to the moon by 2020. The new policy has an unspecified target and timetable; in the meantime, however, it slashes more than \$1.2 billion from space operations. In contrast, NASA's science directorate would receive a \$540 million increase in 2011. "This brings NASA back to its roots as an engine of innovation," says Sally Ride, the first U.S. woman in space and a member of an external commission that seemed to favor such a redirection. NASA: The White House has eliminated the Constellation program—a \$3.5-billion-a-year initiative aimed at building rockets, spacecraft, and other systems for the moon mission. Although the moon mission would be zeroed out under the Administration's proposal, NASA's overall budget would increase by \$6 billion over the next 5 years, including a \$300 million rise to \$19 billion in 2011. NASA officials say Constellation's end could accelerate space exploration by freeing up money for science and letting the private sector take the lead in developing new technologies. The Augustine commission found that "key milestones" of Constellation "were slipping, and that the program would not get us back to the moon in any reasonable time or within any affordable cost," explained NASA Administrator Charles Bolden Jr. at a media briefing.

## **2. Constellation is too expensive**

**The space frontier foundation** ( Founded in 1988, the Space Frontier Foundation is an advocacy organization committed to realizing the vision of a greatly expanded and permanent human presence in space. Space alone offers the resources necessary to ensure the survival and prosperity of our species for numerous generations to come. To realize this vision, the Foundation is fundamentally transforming the conception of space as the exclusive domain of government and government affiliated organizations into a widely accessible frontier ripe with opportunity. Read about our founding and history.)**10** "Is NASA's Constellation Program "Too Big to Fail?" May 3 2010) <http://spacefrontier.org/2010/05/03/too-big-to-fail/> [Pitman]

Just as the Senator says, nothing's too big to fail. The Ares launch vehicles being developed in Senator Shelby's state are a total failure by every honest measure. They will cost too much, are years behind schedule, and our nation's top experts say they could not fulfill their intended mission even if they were built," said the Foundation's Rick Tumlinson. "It is the space equivalent of Wall Street vultures who happily collected huge profits selling bad investments but then demanded our tax dollars when everything fell apart. It's time for Ares to be put to sleep."

## **3. Constellation will Fail-Tech and Money**

**Bonin,** ( aerospace engineer and co-founder of Consortium Technologies, LLC, a Virginia-based company developing innovative technologies for both terrestrial and space-based applications ) **11**(Grant, The Space Review, "Human spaceflight for less: the case for smaller launch vehicles, revisited," 6/6, <http://www.thespacereview.com/article/1861/1>) [Pitman]

The new Space Launch System (also pejoratively termed the "Senate Launch System") has the political benefit of sending billions of dollars to former shuttle contractors, and preserving some NASA shuttle jobs. But aside from being a jobs program, SLS can be expected to accomplish little. In the best case, it will probably fail entirely, and in so doing will merely be wasteful; but in the worst case, there is the possibility it might succeed, and lock NASA into using 1970s technology for the indefinite future, while also marginalizing the involvement of commercial launch providers. Under such conditions, a "post-shuttle era" would never really come.

**Turn – Constellation drains resources from effective programs but can't solve their advantages.**

**John D. Sutter,** CNN Correspondent, 2010 ["Obama budget would cut moon exploration program."  
[http://articles.cnn.com/2010-02-01/tech/nasa.budget.moon\\_1\\_space-exploration-nasa-administrator-charlie-bolden-nasa-programs?\\_s=PM:TECH](http://articles.cnn.com/2010-02-01/tech/nasa.budget.moon_1_space-exploration-nasa-administrator-charlie-bolden-nasa-programs?_s=PM:TECH)]

On its Web site, the White House Budget Office says the program to send astronauts to the moon is behind schedule, over budget and overall less important than other space investments. "Using a broad range of criteria, an independent review panel determined that even if fully funded, NASA's program to repeat many of the achievements of the Apollo era, 50 years later, was the least attractive approach to space exploration as compared to potential alternatives," the site says. "Furthermore, NASA's attempts to pursue its moon goals, while inadequate to that task, had drawn funding away from other NASA programs, including robotic space exploration, science, and Earth observations." Overall, Obama's proposed budget increases the National Aeronautics and Space Administration's budget by \$6 billion over the next five years. The president's budget would give NASA a \$19 billion budget in 2011, compared to its \$18.3 billion budget this year. Congress has to approve the federal budget, and a final ruling may not happen for months. The budget changes will not prevent NASA from returning astronauts to the moon and exploring the rest of the solar system, NASA Administrator Charlie Bolden said in a conference call with

reporters on Monday. "Imagine trips to Mars that take weeks instead of nearly a year; people fanning out across the inner solar system, exploring the Moon, asteroids and Mars nearly simultaneously in a steady stream of firsts ... That is what the president's plan for NASA will enable, once we develop the new capabilities to make it a reality," Bolden said. The NASA administrator emphasized the fact that the president's budget would increase NASA funding overall and said the Constellation program was behind schedule and over-budget anyway.

