

The Space Station Is at Risk, Thanks to Obama's Policies

by Marsha Freeman

Sept. 2—Thanks to Barack Obama, not only the United States, but mankind, is in imminent danger of losing one of its major accomplishments in manned space exploration, the International Space Station (ISS). This is a crime against the future of all humanity.

When Barack Obama was elected President in 2008, he could have reversed his predecessor's ill-conceived policy for the space program, to retire the Space Shuttle before there were a manned vehicle to replace it. If there had been an accelerated effort to develop a new Orion manned vehicle to launch on a new Ares rocket, the Space Shuttle would have only had to fly a few additional missions to service the Space Station, until Orion were ready. Instead, George W. Bush's policy to retire the Shuttle in 2010 was not changed by the new President, ensuring that there would be a gap between the Shuttle and Orion, during which time, the United States would have no ability to launch crew members into Earth orbit.

When Obama's term in office began, it would have been possible to increase NASA's budget and accelerate the development of Orion, and at least close the gap somewhat, reducing the time when there would be no U.S. launch capability. Not only did Obama not accelerate Orion's schedule; he canceled NASA's manned space exploration program, altogether.

With the launch failure of an unmanned Russian Progress cargo ship on Aug. 24, the Russian Soyuz rocket fleet has been grounded. Only after the problem that caused the failure has been identified and fixed, will the Russians resume launches of the unmanned Progress, and then of its manned Soyuz capsule.

As of now, there is *no* way for manned travel *to* the Space Station—only emergency vehicles docked there for return.

The importance of having redundancy in critical



NASA

Obama has canceled NASA's manned space exploration program altogether. So, in the aftermath of the Aug. 24 launch failure of the Russian Progress cargo ship (shown here), mankind now has no way to travel to the International Space Station.

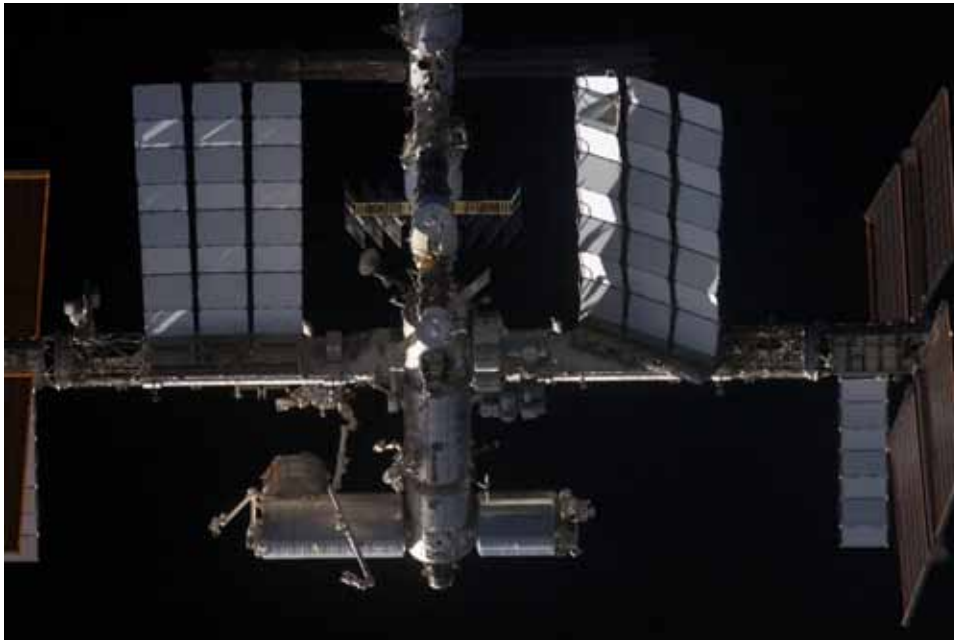
manned space operations was amply demonstrated after the Space Shuttle *Columbia* broke up upon reentry, on Feb. 1, 2003. While the Shuttle fleet was grounded after the accident, the Russian Progress and Soyuz ships kept the Space Station staffed and supplied. Now, with no U.S. manned craft flying, there is no such back-up capability. This has put the 16-nation International Space Station, which has been continuously manned for nearly 11 years, at risk.

Abandon Ship?

Staffing, supplying, and operating an orbital space station is far more complex than is often realized.

Even though the unmanned Progress ship was carrying more than 2.5 tons of cargo, the loss of that freight does not threaten the crew on the ISS, because the final Space Shuttle mission in July delivered enough supplies to last a six-man crew until next June.

But will a crew be there?



NASA

Come November, the Space Station may be left unmanned for the first time in its 11 years. Above, the Space Station seen from the Space Shuttle Discovery during a rendezvous over Western Australia, March 17, 2009.

There are always Soyuz space capsules parked at the station, to bring the crew back in case of emergency. But each three-man vehicle has perishable fuel reserves, and a rated lifetime of 200 days in orbit. Crew time cannot, therefore, be extended indefinitely at the station, due to the time limits of the return Soyuz capsule.

While there are time limits on the Soyuz, the physiological consequences of living in microgravity have led NASA to limit each crew member's stay to a half a year. So there is only a certain amount of leeway in how much the carefully planned rotation of the crew can be changed.

Before the Progress failure, the plan was for the three crew members who have been on station since April 4, to return Sept. 9. The Russian Federal Space Agency, Roscosmos, and NASA have now agreed to delay their return until Sept. 15. Because a manned Soyuz launch to send up three replacement crew members will not be able to be carried out in September, while the fixes to the Soyuz rocket are being made, keeping the crew on station this extra time will keep the station at a full six-man strength for an additional week.

The longest-serving crew cannot stay later than Sept. 15 on station, however, because from mid-September through late October, the landing area for the Soyuz in Kazakhstan will be in darkness, making it ex-

tremely difficult for the Search and Rescue teams to locate them after landing. If, on the other hand, they were to stay aboard the station until late October, when the landing area is again light, the Soyuz parked at the station to take them home would be beyond its certified lifetime.

A three-man replacement crew had been scheduled to launch to the station on Sept. 22. Since that will not happen, when the three crewmen leave on Sept. 15 to return to Earth, the station crew will be at half strength.

Both Roscosmos and NASA agree that there should be two successful unmanned payloads launches

before crew members again fly on a Soyuz rocket. The hope is that this will be accomplished in time for the next three-man crew to be launched to the station, by the end of October. If that launch does not take place by Nov. 19, the three remaining crew will leave, and the station, for the first time in 11 years, will be left unmanned.

NASA space station manager, Mike Suffredini, explained to the press Aug. 29 that although the station can be operated remotely from the ground, the "risk increase is not insignificant." The interruption in the scientific research being carried out in the set of international laboratories on the station, he explained, would be felt most in the life sciences. These include experiments involving the crew members themselves, and are designed to lay the basis for long-term human space exploration.

The Real Danger

At the current moment, there is no danger to the crew on board the station, or to the station itself. The real danger is that any one of a number of ill-conceived "solutions" to the current problem could be taken seriously.

For Russia, this is the fourth launch failure in a few months. This has raised questions, by the Russian

government and also abroad, about the overall state of Russia's aerospace capabilities, considering its only recent emergence from 15 years of neglect, underfunding, deteriorating infrastructure, and brain drain to the West.

But this is no time to proclaim defeat. The Russian space enterprise stands upon an incredible record of reliability and achievement. Among its 44 launches to the Space Station and all other launches since 1978, this was the first time a Progress vehicle was lost. All together, 136 Progress freighters have been successfully deployed by Soyuz rockets. The Soyuz itself has been a work horse of the Russian space program, with more than 745 launches of the current generation, and fewer than two dozen failures, or less than 3%.

Yet, since the recent Progress failure, Russian space officials have tossed out the possibility that the entire program should be put back under (Soviet-era) military control. Or that perhaps space stations do not really have to be manned all the time, and Russia should go back to its 1970s Salyut-era series of stations, which were only periodically occupied by crew.

Various "reform" proposals have been made, and responsible officials, fired. While Prime Minister Vladimir Putin has pledged increased funding for the Russian space program, the aging of the workforce, which is a very serious problem also in the United States, thanks to decades of stagnation, must be addressed. A coherent national mission orientation for a long-term space exploration plan, is what will solve the current Russian problems.

In the U.S., there has been no lack of wrong-headed proposals. Put more money in to new-start commercial rocket companies to accelerate their progress, is the White House approach, instead of taking national responsibility for the future of space exploration.

Carry out more paper studies, is the latest thrust of the Obama plan. NASA announced Aug. 31, the day that the Space Shuttle program was officially closed out, that Shuttle program manager John Shannon was being sent on a world-wide quest. He is to consult with international colleagues on possible manned exploration missions, or "eventual flights to not-yet-specified deep space targets," as space writer Bill Harwood ridiculed.

Pure sabotage. Space scientists, engineers, and mission planners have had the plan for space exploration, for *decades*. There is no need for more "studies." The problem, as former NASA Administrator Mike Griffin

wrote the same day in *Space News*, is that the Obama Administration "has done everything in its power to undermine our nation's human spaceflight program. . . ." It has defied Congress and refused to spend even the inadequate budget that has been allocated for exploration. There is no intention by this President to move forward in space.

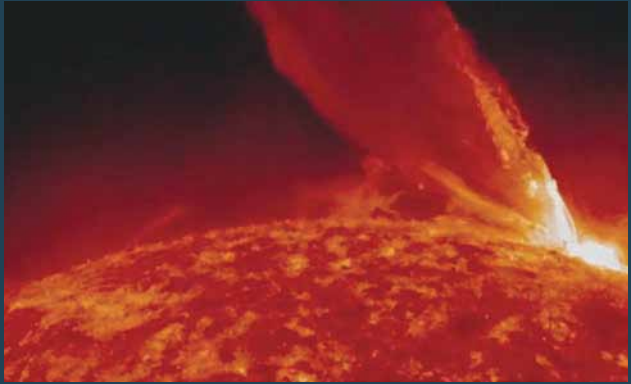
The Obama Administration's projected five-year budget for NASA, as of last year, was for flat funding. But on Aug. 22, *Aviation Week* reported that the White House Office of Management and Budget has asked Federal agencies, in preparing their fiscal year 2013 budget proposals, to submit scenarios for how they would *cut 5% or 10%* from their FY11 funding level.

Working hand-in-hand with balanced budget fanatics in the Congress, the Administration is determined to pauperize the most vulnerable sectors of the American population—the elderly, infirm, and unemployed—and steal the future of our younger generation.

There is no way to "negotiate" with this President. There will be a space program that befits the history and tradition of the nation, only when he is removed from office.

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TO BE OR NOT TO BE: A GALACTIC QUESTION



If we recognize that to man is granted a higher identity, above the simple perceptions of our mere mortal coil, an identity consistent with the greatest achievements of Classical arts and science, then we must locate our mission not in what is, but in what must become.

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