



## **Human Space Exploration Update (Jan 1-9, 2014)**

### **Congress**

- **Senate Commerce Committee:** [Senate Commerce names subcommittee chairs: Ted Cruz for NASA, Marco Rubio for NOAA](#) Ted Cruz, of Texas, and Marco Rubio, of Florida, will chair subcommittees of the Commerce, Science and Transportation Committee responsible for NASA and NOAA.

### **International Space Station**

- **2015:** [Hardware movement and reconfiguration to highlight Space Station operations in 2015 \(Part 2\)](#) The U.S. segment of the International Space Station is slated to undergo change in 2015. Upcoming spacewalks will provide power and other utilities to a pair of future U.S. commercial crew transport vehicle docking ports. A new international docking apparatus is scheduled to arrive by mid-2015.
- **Long-duration Space Operations:** [5,200 Days in Space](#) The 15-nation International Space Station is finding new life as the U.S. and its partners ponder longer human missions to deep space destinations. "In the past decade, America has become a truly, permanently space faring nation," writes The Atlantic. "It's a little strange when you think about it: Just about every American ninth-grader has never lived a moment without astronauts soaring overhead, living in space."

### **Orion and Space Launch System**

- **Orion Launch Abort Testing:** [Mandatory Ascent Abort System Launch Test Lies Ahead Before Orion's First Crewed NASA SLS Blastoff](#) The Orion spacecraft under development by NASA and Lockheed Martin faces new unpiloted flight testing in the aftermath of the successful Dec. 5 two-orbit mission. Before astronauts board Orion, the capsule will conduct a launch abort test from Central Florida. The in flight test of the Launch Abort System is planned for 2018.
- **SLS Booster Motor Testing:** [ATK Schedules First Full-Scale SLS Booster Qualification Motor Test Fire for March 2015](#) NASA and ATK are looking to a March firing of Qualification Motor-1 on a Utah test range. QM-1 represents a crucial part of NASA's Space Launch System heavy lift rocket development. Five segment solid rocket motors based on the design are to increase the lift of future SLS/Orion missions with astronauts assigned to deep space missions.

### **Commercial Space Transportation**

- **Commercial Crew in 2015:** [What's Ahead for Commercial Crew in 2015: One-on-One Interview with NASA's Phil McAlister](#) NASA's efforts to foster the development of two commercial U.S. launch services capable of taking astronauts to and from Earth orbit by the end of 2017 are grounded in 2014 development milestones. Those include the award of two contracts, one to Boeing and the second to SpaceX, who will work under Commercial Crew Transportation Capability agreements awarded in September.

- **Space X Mission to ISS:** [Live coverage: Dragon delivers fresh supplies to space station](#) The latest U.S. commercial resupply mission to the International Space Station rendezvoused with the six person orbiting laboratory early Monday. ISS commander Barry 'Butch' Wilmore grappled the 14-foot long SpaceX Dragon re-supply capsule at 5:54 a.m., EST, with assistance from European Space Agency astronaut Samantha Cristoforetti. Berthing of the capsule that was launched Saturday from Cape Canaveral Air Force Station, Fla., was expected later Monday morning. The grapple unfolded 18 minutes earlier than scheduled. (See also: [SpaceX launches station supply ship; booster landing unsuccessful](#))
- **Sierra Nevada Protest and Plans:** [GAO denies Sierra Nevada protest of Commercial Crew contract](#) Sierra Nevada's bid to overturn NASA's Commercial Crew Program contract awards for the final development of private sector transportation services for astronauts to low-Earth orbit was rejected Monday by the Government Accountability Office. In September, NASA selected Boeing and SpaceX for final development of the CST-100 and Dragon crew capsules, with the goal of starting astronaut launchings by the end of 2017. (See also: [Sierra Nevada to continue Dream Chaser despite CCtCAP protest loss](#) Sierra Nevada vows to continue on with the development of its Dream Chaser commercial transportation system for astronauts headed to low Earth orbit despite the U.S. Government Accountability Office ruling.)

### **Space Budgets, Policy, Missions, Benefits, International ...**

- **Mars Exploration:** [NASA explores inflatable spacecraft technology](#) NASA looks to inflatable heat shield technologies to make future human missions to Mars possible. Parachutes alone are not enough to bring crucial payloads to the surface of the red planet, say those involved in the work at NASA's Langley Research Center. (See also: [Bolden hints at commercial participation on human deep space efforts](#) and [Huge prospects for science and humans to Mars: Conversation with Hubble astronaut/NASA science chief John Grunsfeld \(part 2\)](#))
- **Space – 2014:** [Space News 2014 Year in Review](#) Early in 2014, the White House proposed a extension of International Space Station operations to 2024. As the year unfolded, tensions between Washington and Moscow over Russia's annexation of Crimea leads to U.S. congressional ban on the use of Russian rocket engines. The U.S. commercial space sector weathers the loss of a space station re-supply mission. The new NASA/Lockheed Martin Orion space capsule achieves a successful unpiloted test flight. [Launch activity hits 20-year high in 2014](#) Global launch activity reached its highest level in two decades in 2014. Space News reports that Russian and Chinese launches late in the year pushed the total worldwide to 92 for the year past.
- **Space Technology:** [New NASA Pacts Look To Rush Commercial Space Tech to Shelves](#) NASA expects to hasten the transfer of space technologies for commercial use through a collection of unfunded Space Act Agreements with companies like ATK and United Launch Alliance. The focus of activities ranges from satellite repair and refueling to space suit design. (See also: [Nissan, NASA to work on autonomous car technology](#))
- **Deep Space Exploration:** [The debate about the future of human spaceflight 30 years on](#) Three decades ago, the U.S. National Commission on Space offered a road map for space exploration. The commission's executive director, Marcia Smith, looks back at the recommendations and ahead at what a similar panel empaneled today might recommend. The exploration of deep space ranks as the ultimate goal in either case. But as was the case then, it is what to do first that seems the most difficult challenge.
- **Asteroid Redirect Mission:** [Redirecting asteroid not top objective of asteroid redirect mission, NASA official says](#) The goal of NASA's planned Asteroid Redirect Mission is to develop technologies for future human deep space exploration, a top agency official involved in the effort explained to the NASA-chartered Small Bodies Assessment Group in Phoenix.

## **Florida Highlights**

- **KSC in 2015:** [2015 important one in KSC's post-shuttle transformation](#) KSC's post shuttle transition to a multi-user spaceport counts 2015 as a major part of the change. Workers at Kennedy are developing the infrastructure for the Space Launch System heavy lift rocket for future human missions to deep space destinations as well as reviving a former shuttle/Apollo launch pad for commercial use. The state of Florida is also looking at assuming oversight of the space shuttle runway.

***Citizens for Space Exploration*** – a pro-space, grassroots advocacy group, supported by the Melbourne Regional Chamber of Commerce, travels to Washington, D.C. to meet face-to-face with Members/staff of Congress to discuss the value of America's investment in space exploration. To sustain that dialogue on a regular basis, Citizens distributes "Human Space Exploration Update" to Congressional offices on a weekly basis and makes it available to our Chamber members as a quick-and-easy way to stay informed on developments impacting NASA and Space Coast Florida.  
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