



Human Space Exploration Update (August 3-14, 2015)

Congress

- **Interview with Rep. Babin (R-TX-36):** [Q&A with U.S. Rep. Brian Babin \(R-Texas\), Chairman of the House Science Space Subcommittee](#) The chair of the House policy making panel for civil space, Texas congressman Brian Babin, would prefer that NASA focus on human exploration and aeronautics as it moves ahead. Babin, whose Texas congressional district includes NASA's Johnson Space Center, acknowledges that it may be necessary to control space costs by consolidating NASA field centers. With regard to NASA's Commercial Crew Program, Babin has not decided whether the agency should continue to foster spacecraft development by two contractors or down select to one.
- **Funding for Exploration:** <http://www.americaspaces.com/?p=83474>

International Space Station

- **ISS Operations Extension:** [Commercial space bill clears Senate](#) The Senate has passed the Commercial Space Launch Competitiveness Act, which extends the operations of the International Space Station through 2024. The measure awaits reconciliation with a House version. The White House requested an extension of space station operations from 2020 to 2024 in early 2014.
- **Growing and Eating Food in Space:** [Astronauts snack on space-grown lettuce for first time](#) NASA astronauts Scott Kelly and Kjell Lindgren were joined by Japanese astronaut Kimiya Yui Monday in tasting fresh red romaine lettuce grown aboard the International Space Station, a space first.
- **ISS Leadership Change:** [NASA Space Station program manager stepping down](#) NASA's Kirk Shireman will replace the departing Mike Suffredini as NASA's International Space Station program manager. Currently, the deputy director of NASA's Johnson Space Center, Shireman is a previous deputy ISS program manager.

Orion and Space Launch System

- **Orion CDR:** [NASA's Orion spacecraft conducts CDR on the road to EM-1](#) NASA's Orion crew exploration spacecraft has entered the Critical Design Review phase of its development, a milestone that is expected to extend into late October. The detailed review will prepare the spacecraft for a test flight atop NASA's Space Launch System exploration rocket for the first time in late 2018. The test flight, designated Exploration Mission-1, will send the unmanned Orion spacecraft around the moon and back to Earth.
- **SLS Support for Science Missions:** [NASA's Space Launch System can do more than human missions, could be "transformative for science"](#) NASA's Space Launch System exploration rocket could be tasked with more than human missions, the space agency's John Grunsfeld, associate

administrator for science, explained to the House Science, Space and Technology Committee during a recent hearing. Jupiter's moon Europa could be an early SLS enabled planetary science mission.

- **RS-25 Engine Testing:** [NASA test-fires engine for next-gen megarocket](#) NASA marked a milestone in the development of the Space Launch System exploration rocket with a nearly nine minute ground test firing of an RS-25 rocket engine. The upgraded engine that traces its heritage to NASA's space shuttle program is headed for the first stage of the Space Launch System exploration rocket. A NASA test flight that will send an unpiloted Orion crew exploration capsule around the moon and back in late 2018 is counting on the SLS for propulsion.

Commercial Space Transportation

- **CST-100 Progress:** <http://www.nasaspacesflight.com/2015/08/boeings-cst-100-progress-commercial-crew-funding-uncertainties/>
- **Orbital Buys Second Atlas Launch:** [Orbital ATK buys second Atlas rocket launch for Space Station run](#) Orbital ATK updated the company's strategy to recover from the Oct. 28 loss of an Antares rocket moments after liftoff from Virginia's Wallops Island with supplies bound for the International Space Station. Orbital will acquire a second United Launch Alliance Atlas 5 launch vehicle to give it more flexibility as it resumes cargo missions to the six person station in December. Use of the Atlas 5 and an upgraded version of the Antares beyond that will permit Orbital to meet its NASA contracted resupply obligations with fewer launches than originally planned. (See also: [Cygnus set for December Atlas V ride ahead of Antares return](#))
- **Contract with Russia:** [NASA signing \\$490M contract with Russia](#) NASA Administrator Charles Bolden has informed Congress that his agency is extending its contract with Roscosmos, the Russian federal space agency, for the launching of astronauts to the International Space Station because of underfunding of the Commercial Crew Program. The agency is working under contract with SpaceX and Boeing to resume human launches from the U.S. by the end of 2017.

Ground Systems Development & Operations

- **Monthly Update:** http://www.nasa.gov/exploration/systems/ground/gsdo_newsletters.html

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

- **Response to "Pathways to Exploration" Report:** [NASA's advisers seek agency response to exploration report](#) After a year old assessment of the U.S. civil space program and its goals, the National Academy of Science would like a formal response from NASA. The findings suggest the moon rather than an asteroid was a more appropriate interim destination toward an ultimate destination, Mars. The NRC's *Pathways to Exploration*, released in June 2014, also suggested NASA's exploration efforts will require more funding.
- **Debating Mars:** [MIT researchers joining debate on Mars colony](#) A mid-August Mars Society gathering in Washington will include a debate over Mars One plans to start a colony on Mars. An earlier study by two MIT students questioned the engineering strategy put forth by the Dutch nonprofit to start the small human settlement in the mid to late 2020s. Both perspectives will be presented.
- **Mission to Phobos:** [Mission to Phobos: The precursor to human Mars landing](#) The Martian moon Phobos is an interim destination of interest to those planning an eventual human mission to the red planet, according to the report. Like the moon and asteroids under study as stepping

stones to Mars, Phobos offers an opportunity to test space hardware and exploration systems needed to reach the Martian surface.

- **Robot to Support Mars Exploration:** [Giant NASA robot to assemble parts for Mars mission](#) At NASA's Marshall Space Flight Center, engineers with the Composites Technology Center are preparing a new robot for the assembly of large spacecraft components from spools of carbon fibers. Some of the composite components may be used on updated versions of NASA's Space Launch System heavy lift rocket, the initial propulsion source for future NASA human as well as robotic deep space ventures.
- **Hawaii Mars Mission:** [Epic year-long mock Mars mission to 'launch' in Hawaii](#) Aug. 28 has been designated as the "launch date" for six scientist volunteers who will spend a year in a simulated Mars base in Hawaii. Participants in the Hawaii Space Exploration Analog and Simulation were selected late last month. The participants have professional expertise in astrobiology, neuroscience, planetary geology, physics and flight control.
- **"The Martian":** [Enabling 'The Martian'](#) *The Martian*, a much anticipated new movie based on Andrew Weir's book of the same name, opens in theaters Oct. 2, possibly representing a positive and realistic future in which humans demonstrate they are capable of great things, write Chris Carberry, CEO of Explore Mars, and his associate Rick Zucker. "The Martian has emerged at a significant juncture in our nation's space program," they write. "After over 50 years of talking about sending humans to Mars, momentum is finally building for humanity to actually achieve that goal."
- **Planet for Neil Armstrong:** [NASA astronaut Neil Armstrong may have a planet named for him](#) The International Astronomical Union is hosting a public vote on the naming of 15 stars and 32 exo-planets. The balloting creates the possibility that the first distant planet discovered around a sun like star could be named for Neil Armstrong, commander of NASA's Apollo 11, the first human moon landing mission. The planet designated 51Pegasi b would be Neil, the star, Apollonis.

Florida

- **Buzz Aldrin at FIT:** [Buzz Aldrin will become professor at Florida Tech](#) Apollo 11 astronaut Buzz Aldrin takes a professor's position at the Florida Institute of Technology. Aldrin will be a research professor of aeronautics and a central figure in a new Buzz Aldrin Institute.
- **GSDO Contract Award:** [NASA awards contracts for SLS ground systems](#) NASA has chosen J.P. Donovan Construction, based in Rockledge, Fla., as the prime contractors for upgrades to the ground support systems at the Kennedy Space Center to support future launches of the Space Launch System exploration rocket.
- **Launch Services Acquisition:** [GAO: Air Force needs incremental approach to launch services acquisition](#) The General Accountability Office has urged the Air Force to pursue a cautious approach in its future procurements of launch services for national security payloads. United Launch Alliance, the incumbent Evolved Expendable Launch Vehicle contractor under a cost reimbursement contract, now faces a challenge from SpaceX. Future agreements may be fixed price.

Citizens for Space Exploration – a pro-space, taxpayer, grassroots advocacy group (http://www.bayareahouston.com/content/c_s_e/c_s_e) – has travelled to Washington, D.C. the past 23 years to meet face-to-face with Members/staff of Congress to discuss the value of America's investment in space exploration. In order to sustain that dialogue on a regular basis, Citizens distributes "Space

Exploration Update" to Congressional offices on a weekly basis. The intent is to provide an easy, quick way to stay abreast of key human space exploration program and policy developments.