



Human Space Exploration Update (April 18-22, 2016)

Congress

- **NASA Budget:** [Senate Appropriators Approve \\$19.3 Billion for NASA for FY2017](#) The Senate Appropriations Committee approved a NASA budget of \$19.3 billion for 2017, a small increase over the 2016 level, according to the report. The measure supports work on the Space Launch System exploration rocket as well as an Enhanced Upper Stage, the Orion crew exploration vehicle and the agency's Commercial Crew Program.

International Space Station

- **Expandable Crew Module:** [Expandable crew module attached to space station](#) The Bigelow Expandable Activities Module delivered to the International Space Station last week on the most recent U.S. commercial re-supply mission was removed from the freighter early Saturday morning using Canadian robot arm operations and attached to the orbiting lab's Tranquility module. The prototype module for human habitation in Earth orbit and deep space is scheduled to be expanded in late May from its current 7 feet in length and 8 feet in diameter to 13 feet in length and 10 feet in diameter. A two year observation period is to follow.

Orion and Space Launch System

- **Orion Program Update (March):** http://www.nasa.gov/sites/default/files/atoms/files/orion_monthly_newsletter_03-2016b.pdf
- **Orion Acoustic Testing:** [Turn up the bass! Orion Service Module to begin acoustic testing at Plum Brook Station](#) Monday will mark the start of a rigorous round of acoustic testing for the Orion capsule's European Space Agency provided service module at NASA's Glenn Research Center Plum Brook Station. The service module will provide the crewed Orion spacecraft with power, air, propulsion and cooling. The acoustic testing is expected to take six weeks.
- **SLS Program Update (March):** http://www.nasa.gov/sites/default/files/atoms/files/sls_highlights_mar_2016_web.pdf
- **SLS Welding:** [Welding Wonder Completes Hardware for First Flight of NASA's SLS Rocket](#) The first stage of NASA's Space Launch System hardware for the Exploration Mission-1 flight test planned for late 2018 has completed component welding at the Michoud Assembly Center in New Orleans.

Commercial Space Transportation

- **I Will Launch Commercial Crew:** <http://www.nasa.gov/centers/marshall/news/news/releases/2016/i-will-launch-america-launch-vehicle-deputy-manager-dayna-ise.html>

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

- **Stay the Course on Exploration:** [Op-ed | Stay the Course: Continue America's Progress in Space](#) Current U.S. space policy, in which government investments are committed to human and planetary science deep space exploration objectives, serves a range of national interests, from national security to scientific discovery and a stronger economy. Commercial sector advances into Low Earth Orbit are equally significant, serving a range of stakeholders -- from taxpayers to innovation minded entrepreneurs and investors, writes Mary Lynne Dittmar, executive director of the Coalition for Deep Space Exploration.
- **Mars Exploration:** [NASA getting closer to "Boots on Mars" with Colorado companies' help](#) A key to the human exploration of Mars is reducing our dependence on the Earth, explains Dava Newman, NASA's deputy administrator, during her participation in the 32nd Space Symposium in Colorado Springs last week. Research aboard the International Space Station is helping, Newman noted. She also praised the efforts of Colorado companies, including Lockheed Martin Space Systems, Sierra Nevada and Ball Aerospace in reaching the goal. (See also: [Inside the Grand Plan to Send Humans to Mars](#))
- **Russia-China Space Collaboration:** [Russia and China successfully cooperate in space exploration Chinese deputy minister](#) Igor Komarov, CEO of Roscosmos, the Russian space agency and corporation, will mark China's upcoming National Space Day in the host country. The two nations are cooperating in "several dozen" areas of space exploration, according to a high ranking official from China's industry and information technology ministry.
- **Chinese Rocket Testing:** [China testing own reusable rocket technologies](#) China will join a global race to develop reusable rockets, the Chinese news agency Xinhuanet reports.
- **Chinese Space Station:** [China to launch 'core module' for space station around 2018](#) China plans to launch the core stage for a new space station around 2018. Assembly of the permanently staffed orbital outpost should be complete in 2022, according to the state-run Xinhua news agency
- **Solar Electric Propulsion:** [An engine for Mars: Aerojet wins \\$67 million NASA contract for solar electric propulsion](#) Under a \$67 million NASA contract announced Tuesday, Aerojet Rocketdyne will pursue the development of a solar electric propulsion system. SEP is NASA's choice for the Asteroid Robotic Redirect Mission to collect a boulder from an asteroid and maneuver it into orbit around the moon for a visit by U.S. astronauts. SEP is also a strong propulsion candidate for missions in the 2030s that would transport U.S. astronauts to the Martian environs.

Florida

- **OneWeb:** [Florida factory to mass-produce satellites at record pace](#) Satellite maker OneWeb forecasts the production of 15 internet service satellites per week under the roof of a new factory that will be located outside the gates of NASA's Kennedy Space Center in Central Florida. The opening is planned for late 2017.
- **VAB:** [NASA's Rocket Garage is Huge and So Are Its Tools](#) At NASA's Kennedy Space Center in Central Florida, the mammoth Vehicle Assembly Building is being reworked to accommodate preparations for the final assembly and launch of the agency's Space Launch System exploration rocket. SLS is under development to start U.S. human explorers on missions of deep space exploration. Construction of the VAB, which served as the prelaunch assembly facility for the Saturn V moon rocket and the space shuttle, began in 1963. (See also:

<http://www.nasa.gov/image-feature/preparing-the-vehicle-assembly-building-for-nasas-next-rocket>

- **Orbital ATK Rocket:** [Orbital ATK Picked to use NASA's Vehicle Assembly Building at Kennedy Space Center](#) NASA announced on Thursday it will negotiate with Orbital ATK for use of space in the Kennedy Space Center's Vehicle Assembly Building in Florida. Use of the VAB is part of a development plan with the Air Force for a new large to medium class launch vehicle.

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 24 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.