



Human Space Exploration Update (June 22-26, 2015)

Citizens for Space Exploration Student Advocates for Congressional Support

[FIT grad: Space exploration needs congressional support](#)

Florida Today (6/23): Prepared to join the U.S. aerospace workforce, Florida Institute of Technology graduate Kristin Shahady explains her eagerness to participate in future exploration and space technology development. "America has always been about exploration and the future. NASA is the most visible example of what the nation can do when it agrees on a common goal," she writes in an op-ed. Last year, Shahady joined a group of students who took that message to members of Congress as part of an annual event sponsored by the Citizens for Space Exploration.

International Space Station

- **Scott Kelly at 3 Months:** [NASA astronaut Scott Kelly on life aboard the space station](#) Aboard the International Space Station, NASA astronaut Scott Kelly is three months into a near yearlong mission. So far, Kelly tells CBS news, he's doing well mentally and physically. Kelly told anchor Scott Pelly the research he and Russian colleague Mikhail Kornienko are taking part in could be a crucial part of future plans to explore Mars with humans.
- **Augmented Reality for ISS:** [NASA is sending Microsoft's most incredible new tech into space](#) A pair of Microsoft HoloLens augmented reality head sets are headed to the International Space Station. The devices are intended to allow ground based experts to follow along as station astronauts carry out their tasks, even offer coaching as the work progresses.
- **Astronaut Food:** [Astronauts might eat KSC's next space lettuce crop](#) Lettuce seeds will be among the cargo delivered to the crew of the International Space Station during the next U.S. commercial resupply mission for germination in orbit. Scientists at NASA's Kennedy Space Center have determined the red romaine lettuce grown from the seeds is safe for astronauts to eat.

Orion and Space Launch System

- **Orion Service Module Testing:** [Plum Brook prepped for EM-1 Orion Service Module testing](#) The NASA/Lockheed Martin Orion capsule and a European Space Agency built Service Module will be joined at NASA's Glenn Research Center this year for pre-launch testing. NASA's future crew exploration capsule and the Service Module are being prepped for an unmanned test flight aboard a Space Launch System heavy lift rocket in 2018. All three major component share

heritage hardware from past programs including NASA's shuttle and ESA's Automated Transfer Vehicle.

- **Advocating for SLS:** [U.S. will keep lead in space with NASA's Launch System](#) NASA's Space Launch System is an essential part of future U.S. space exploration, write Doug Cooke, Stephen Cook and David King, the space agency's former associate administrator for exploration, Ares program manager and Marshall Space Flight Center Director. At \$4.5 million per ton for payload, the SLS will be competitive with commercial systems, they write in an op-ed. A capable heavy lift rocket is necessary to boost in space habitats and planetary landers as well as speed up travel times.

Commercial Space Transportation

- **Commercial Crew Funding:** [NASA warns GOP on cuts to space program](#) NASA is warning members of Congress their deliberations on the agency's 2016 budget could become a roadblock to efforts to end U.S. reliance on Russia for the transportation of astronauts to and from the International Space Station. So far, NASA has paid Russia \$1.2 billion for Soyuz crew transport launchings. NASA would like to initiate a domestic alternative by late 2017 by fostering competing commercial launch services operated by Boeing and SpaceX. NASA is seeking \$1.24 billion next year to achieve the 2017 deadline. Both chambers of Congress have approved less. (See also: [Commercial Crew budget debate centers on program schedule](#))

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

- **Mars Missions:** [Destination Mars: NASA asks where astronauts should land](#) NASA has begun deliberations on potential Mars landing sites for human missions carried out in the 2030s. The discussions are to continue in late October at the Lunar and Planetary Science Institute in Houston. The talks will focus on prospective landing zones of scientific interest with evidence of resources that could support future human missions.
- **New Space Suits:** [Astronauts need flexible spacesuits for Mars](#) Whether it's an asteroid, the lunar environs or Mars, human explorers will need space suits to move around with greater flexibility than those used to assemble and maintain the International Space Station. Engineers at NASA's Johnson Space Center are looking at three possible designs.
- **Shuttle Landing Facility:** [NASA hands over historic shuttle landing facility for commercial use](#) Oversight of the former space shuttle runway at NASA's Kennedy Space Center was formally turned over to Space Florida, a state economic development agency, as part of Kennedy's post shuttle transition to a multi-user spaceport. The agreement will span a minimum of three decades.

Florida

- **Mars:** [Op-ed: We can find unity on Mars](#) The U.S. could find a new unity by rallying behind a human mission to Mars by 2025, write Jeff Kottkamp, a former Florida lieutenant governor, and Rich Ramos, a Tallahassee business development specialist. They find the nation divided, the unity that emerged after the terrorist attacks of Sept. 11, 2001 evaporating. "Are we simply doomed to watch the fabric of America continue to fray? Is there anything short of war and national tragedy that can bring us together?" they ask. Their Mars objective, they add, would advance technology, improve education and lead to better, higher paying jobs.
- **RD-180:** [Hearing on U.S. space launch strategy could get testy](#) The chair of the U.S. House Armed Service's subcommittee on strategic forces warned Monday that it's time for the Pentagon and the U.S. aerospace industry to end its reliance on Russia's RD-180, a rocket engine used to power the United Launch Alliance Atlas 5 rocket with U.S. national security satellites. Lawmakers

have said the imports must stop by 2019. Rocket maker United Space Alliance is working with rocket engine company Blue Origin to develop a replacement. The Pentagon has looked to a broader propulsion development effort.

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.