



Human Space Exploration Update (May 1-5, 2017)

NASA Budget

- **FY17 Appropriations:** [Trump signs \\$1 trillion spending bill, keeps government open](#) President Trump signed a 2017 appropriations measure that funds government operations through September 30, the end of the current fiscal year. The measure includes \$19.653 billion for NASA, a \$368 million increase over 2016 and \$628 million more than proposed for 2017 by President Obama. (See also: [NASA receives more than \\$19.6 billion in 2017 omnibus spending bill](#))

International Space Station

- **Exploration and Commercialization:** [Made in Space](#) The International Space Station (ISS) serves two critical roles for pioneering space development. It is our gateway to human exploration of the solar system and an incubator for the commercial development of space beyond telecommunications. Made In Space is a small business that has capitalized on the unique capabilities of the ISS to spur technological and business innovations for both.

Orion and Space Launch System

- **Orion Rocket Motor Test:** [The abort rocket motor for NASA's Orion spacecraft just aced a big test](#) Orbital ATK announced that the company's contribution to the Abort System rocket for NASA's Orion crew exploration capsule performed successfully during a recent ground test. If there were an emergency during liftoff, the rocket would help steer Orion and its astronaut crew safely away from the Space Launch System to landing.
- **SLS Wind Tunnel Testing:** [NASA Langley runs more wind tunnel tests on Space Launch System rocket models](#) NASA Langley Research Center engineers have subjected a scale model of the Space Launch System rocket to various launch pad wind conditions like those expected at the exploration rocket's Kennedy Space Center launch complex in Florida.
- **NASA Michoud Supports Orion and SLS:** [Guest column: Louisiana helping NASA launch into deep space](#) Todd May, director of NASA's Marshall Space Flight Center, explains the role of the Michoud Assembly Facility in the space agency's efforts to return to deep space with human explorers. At Michoud, nearly 3,500 workers are involved in the production of the Space Launch System's first stage rocket and the pressure vessel for the Orion crew exploration capsule.

Commercial Space Transportation

- **Starliner Engine Testing:** [Starliner's propulsion system engines complete qualification tests](#) The steering system thrusters for Boeing's CST-100 Starliner have been qualified. Aerojet Rocketdyne hardware will help steer the capsule in development under NASA's Commercial Crew program to transport astronauts to and from the International Space Station.

Space Policy, Missions, Benefits, International ...

- **Space Council:** [Executive Order creating National Space Council expected soon](#) The White House is close to re-establishing the National Space Council, a cabinet level group led by the vice president to help shape U.S. space policy, according to Bob Walker, an advisor to the Trump Administration and former chair of the House Science, Space and Technology Committee.
- **Interview with NASA JSC's Ellen Ochoa:** [NASA's Ellen Ochoa: We are going deeper into space than ever](#) Ellen Ochoa, the first Hispanic female astronaut, leads NASA's Johnson Space Center. A Stanford educated electrical engineer, Ochoa launched five times as a shuttle astronaut. This month she will be inducted into the U.S. Astronaut Hall of Fame. Johnson leads the development of NASA's Orion capsule, the spacecraft that is to launch and land astronauts selected for future missions of deep space exploration.
- **Mars Exploration:** [If we successfully land on Mars, could we live there?](#) After a month's long journey from Earth, human explorers face the challenges of reaching the surface of Mars safely, then sustaining themselves and moving about in the thin, dry atmosphere, cold temperatures and low gravity. NASA is working with the U.S. private sector and its international partners to address these challenges.
- **Lunar Exploration:** [The moon is the gateway to NASA's exploration future](#) While awaiting exploratory direction from the Trump White House, NASA is planning how human operations in the lunar environs of the Earth can support the future exploration of Mars.
- **Space Mining:** [Space-mining may be only a decade away. Really.](#) Middle Eastern states are expressing interest in space mining, possibly the extraction of water and minerals from the moon and other planetary bodies, to fortify their economies. Shrinking launch costs appear an important part of making the enterprise possible.

Citizens for Space Exploration – a pro-space, taxpayer, grassroots advocacy group (www.citizensforspace.org) – has travelled to Washington, D.C. the past 25 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.