



Human Space Exploration Update (August 14-30, 2017)

International Space Station

- **Honoring Peggy Whitson:** [NASA astronaut Peggy Whitson honored by 'Makers' as trailblazing woman in space \(video\)](#) Astronaut Peggy Whitson has been honored by a trail blazing group of women called "Makers." A biochemist, Whitson has commanded the International Space Station twice in three long duration missions to the orbiting science lab. She returns to Earth in early September as the U.S. record holder for time accumulated in space over a career.
- **3-D Printing:** [3-D printing and in-orbit manufacturing promise to transform space missions](#) California based Made in Space, Inc., may be changing the way space hardware launches and reaches its destinations with demonstrations of 3-D printing, or additive manufacturing, aboard the International Space Station. (See also: [Spacewalking cosmonauts release 3-D printed satellite](#))

Orion and Space Launch System

- **Orion "Power Up":** [NASA powers up spacecraft that could one day carry humans to Mars](#) Orion, the human spacecraft that Lockheed Martin is developing for future NASA missions of human deep space exploration, was powered up in its latest configuration on Tuesday at the Kennedy Space Center. The capsule is undergoing preparations for Exploration Mission-1 (EM-1), an unmanned test flight that will send the capsule around the moon and back to Earth for re-entry, ocean splashdown and recovery. NASA is evaluating a launch date for EM-1, which will pair Orion with the Space Launch System rocket. (See also: [Local company creates parts for NASA's Orion spacecraft launch](#))
- **SLS Hardware:** [Marshall Space Flight Center unveils largest SLS hardware](#) NASA's Marshall Space Flight Center displayed its largest piece of hardware assembled for the Space Launch System exploration rocket. The Launch Stage Vehicle Adapter separates core and second stages of the rocket designed to start human explorers on future missions of deep space exploration.
- **Orion and SLS Monthly Updates:** https://www.nasa.gov/exploration/systems/mpcv/orion_reports_archive.html and http://www.nasa.gov/exploration/systems/sls/sls_highlights.html (See also: http://www.nasa.gov/exploration/systems/ground/gsdo_newsletters.html)

Commercial Space Transportation

- **Dream Chaser Update:** [Dream Chaser prepares for captive carry test; completes runway tow tests](#) Sierra Nevada's mini Dream Chaser space plane is preparing for helicopter borne captive carry tests, following a series of runway tow tests at Edwards Air Base, California, earlier this month. The uncrewed Dream Chaser is one of three spacecraft chosen by NASA for the resupply of the International Space Station under a second round of contracts that go into effect no earlier than 2019. Sierra will join Orbital ATK and SpaceX in carrying out the future cargo missions.

- **Commercial Crew Program Schedule:** [SpaceX confident commercial crew flights in one year](#) A SpaceX official expressed optimism the company could be launching astronauts to the International Space Station by this time next year through its partnership with NASA's Commercial Crew Program. (See also: <https://www.nasaspacesflight.com/2017/08/spacex-boeing-home-stretch-commercial-crew-readiness/>)
- **Space Suits:** [Elon Musk posts first photo of SpaceX's new spacesuit](#) SpaceX has unveiled its spacesuit for astronauts assigned to Falcon 9/Dragon missions contracted by NASA to transport astronauts to and from the International Space Station.

Space Policy, Missions, Benefits, International ...

- **New NASA Astronauts:** [Get to know NASA's new astronaut class](#) NASA welcomed seven men and five women to the start of two years of astronaut candidate training at the Johnson Space Center, home to the astronaut corps and Mission Control. Learn more about these 12 men and women in a series of NASA videos.
- **Lunar Exploration:** [Chris Hadfield: We should live on the moon before a trip to Mars](#) Canadian astronaut Chris Hadfield urges space policy experts to consider human expeditions to the moon before setting out for Mars.
- **Space Mining Program:** [School of Mines hopes to launch first-ever space mining program](#) Based in Golden, the Colorado School of Mines plans a new graduate program in the identification and extraction of resources from the moon and other solar system bodies that can be used to support deep space exploration, including water, metals and fuels.
- **Mars Exploration:** [SpaceX informed NASA of slowdown in its commercial Mars program](#) A top NASA planetary science official confirms that SpaceX has indeed put its Red Dragon mission, a commercial effort to land an uncrewed capsule on Mars, on the back burner for now. Once planned for a 2018 landing, SpaceX CEO Elon Musk said earlier this year the experiment has slipped two years and that the company was dropping efforts to equip its Dragon crewed lander with a propulsion landing system.

Citizens for Space Exploration – a pro-space, taxpayer, grassroots advocacy group (www.citizensforspace.org) – has travelled to Washington, D.C. the past 26 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 to provide an easy, quick way to stay abreast of key human space exploration program and policy developments.