



Space Launch System

Highlights

August 2012



Booster Requirements Review Complete



A five-segment booster development motor sits on the test stand in Promontory, Utah.
Credit: ATK

The Space Launch System (SLS) Program successfully completed a Booster Requirements Review (BRR) with prime contractor ATK Space Systems, a division of Alliant Techsystems of Brigham City, Utah, on Aug. 28. NASA and ATK engineers determined the booster's technical requirements were adequate, complete and verifiable. The reviewers also verified the booster architecture is sound enough to proceed to a Preliminary Design Review (PDR) in 2013. The five-segment solid rocket booster will provide primary liftoff propulsion for the 70-ton SLS rocket, allowing America to explore beyond low Earth orbit on future journeys into space.

J-2X Powerpack Setting More Records at Stennis

This summer, the developmental J-2X powerpack assembly continued to set records at Test Stand A-1 at NASA's Stennis Space Center in Bay St. Louis, Miss. The first new record was set during a test firing on June 8 and lasted 1,150 seconds, more than a full minute longer than the previous record for Test Complex A. That record, in turn, was shattered during test firings on July 24 (1,350 sec.) and Aug. 16 (1,261 sec.).

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J-2X Powerpack

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The powerpack is designed to feed the thrust chamber on a complete J-2X upper stage engine. It is being tested without a thrust chamber so it can be operated over a wide range of conditions, allowing engineers to understand better the engine's safety limits.

As the first human-rated liquid oxygen and liquid hydrogen-fueled rocket engine to be developed in 40 years, the J-2X engine will help power the evolved 130-ton SLS rocket on long-range journeys of discovery to destinations such as near-Earth asteroids, Lagrange points and, ultimately, Mars. It is being built by Pratt & Whitney Rocketdyne for NASA's Marshall Space Flight Center in Huntsville, Ala.



The J-2X developmental powerpack assembly has again made history at Stennis Test Stand A-1. *Credit: NASA/SSC*

SLS Outreach at Minority Business Conference



Todd May, SLS program manager, discussed the SLS rocket at the 2012 Business Connections Conference & Business Opportunity Expo. Mr. May was the keynote speaker at the Minority Business Enterprise Showcase Luncheon held on Aug. 15. *Credit: SRMSDC*

SLS Program Manager Todd May delivered the keynote address at a luncheon attended by 250 minority business entrepreneurs in Birmingham, Ala. The 2012 Business Connections Conference and Business Opportunities Expo were sponsored by the South Region Minority Supplier Development Council (SRMSDC) and were held Aug. 14 and 15. Small business specialist David Brock from Marshall's Office of Procurement was one of six presenters for the workshop "Connecting the Dots: Managing the Puzzle Pieces for Sustainable Partnerships." Current and planned opportunities also were shared with small business suppliers by SLS prime contractors ATK, Boeing and Pratt & Whitney Rocketdyne, as well as SLS support contractors Jacobs Engineering, Science Applications International Corporation (SAIC) and Teledyne Brown Engineering.

SLS Panel and Exhibit at Joint Propulsion Conference

The SLS Program participated in the 48th Annual Joint Propulsion Conference and Exhibit held July 29 through Aug. 1 in Atlanta. On July 30, Don Sauvageau of the American Institute of Aeronautics and Astronautics' Space Transportation Committee moderated a panel in which four SLS executives participated: Todd May, program manager; Garry Lyles, chief engineer; Sheri Kittredge, engines deputy manager; and Alex Priskos, boosters manager. They discussed progress and future plans for the program's propulsion systems. The SLS Education and Public Outreach (EPO) team exhibited a one-fiftieth scale model of the 70-ton rocket and distributed outreach materials to conference goers. The EPO team also made presentations at two conference-related "Engineers as Educators" workshops.



The EPO team discussed the SLS rocket with attendees at the Joint Propulsion Conference in Atlanta. *Credit: NASA/MSFC*



The SLS EPO team participated in the 15th Space and Missile Defense Conference held Aug. 13 – 16 at the Von Braun Center in Huntsville, Ala. A one-fiftieth scale model of the 70-ton rocket was featured as part of Marshall's exhibit, which received 1,500 visitors. *Credit: NASA/MSFC*

SLS Awards Breakfast



The SLS team gathered for the first SLS Awards Breakfast on Aug. 28 at the U.S. Space & Rocket Center's Davidson Center for Space Exploration. Honors included management, special service, length of service, and peer awards. *Credit: NASA/MSFC*



During the first SLS Awards Breakfast, SLS Program Manager Todd May praised Neil Armstrong's legacy and influence on the future of human space flight. Armstrong is best remembered for his role as commander of the Apollo 11 lunar mission, widely considered to be the most daring scientific expedition of the 20th century. He became the first person ever to set foot on the Moon on July 20, 1969. *Credit: NASA/MSFC*

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