National Aeronautics and Space Administration

The Next Great Ship: NASA's Space Launch System

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Space Launch System (SLS)

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One Ship, Many Destinations

Source: Tony Horwitz, Blue Latitudes: Boldly Going Where Captain Cook Has Gone Before.

The Next Great Ship

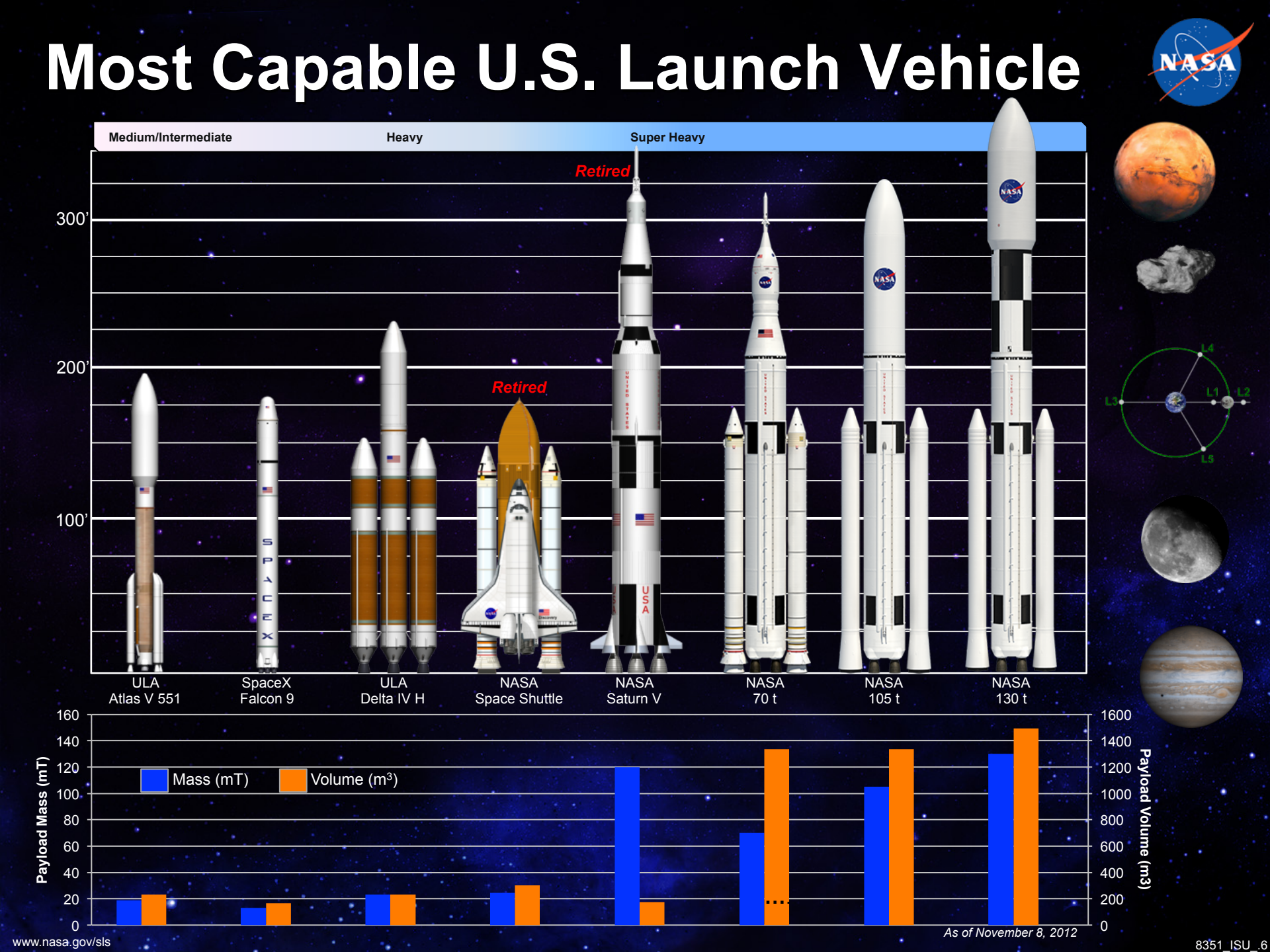
“The New Ocean”

Islands In Our Ocean

The Space Launch System [will] be the backbone of its manned spaceflight program for decades. It [will] be the most powerful rocket in NASA's history…and puts NASA on a more sustainable path to continue our tradition of innovative space exploration.

President Obama's Accomplishments for NASA
May 22, 2012

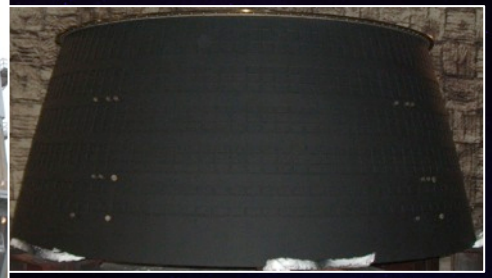
Most Capable U.S. Launch Vehicle



Liquid Engines Progress

RS-25 engines in inventory at Stennis Space Center for first four flights

Reinstalling J-2X E10001 in A-2 test stand at SSC



J-2X Nozzle Extension for engine tests

Full-duration test of J-2X E10002 in A-2 test stand at Stennis Space Center in February 2013

Boosters Progress

Flight Control Test-2 in January 2013 at ATK in Promontory, Utah

Development Motor Test 3 on September 8, 2011 at ATK in Promontory, Utah

Qualification Motor casting, July 2012

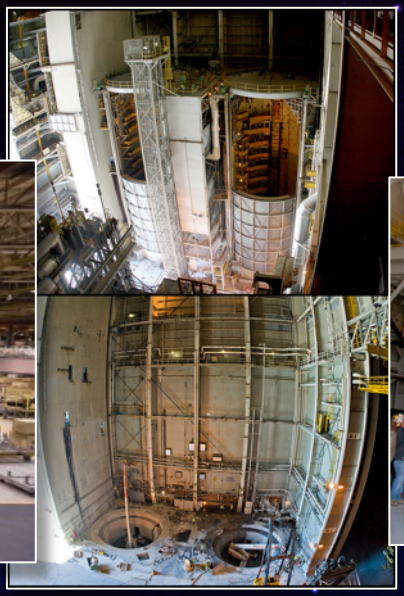
MSFC tested a small solid rocket motor designed to mimic NASA's SLS booster

Value stream mapping will reduce production costs for SLS boosters

Stages and Avionics Progress

First test panel for SLS Core Stage liquid hydrogen tank in December 2012 at AMRO Fabricating Corp. in South El Monte, Calif.

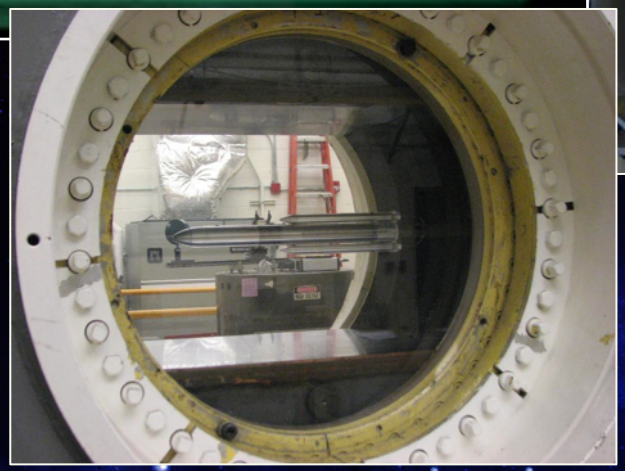
Avionics Software Test-Bed May 2012



Refurbishment of Michoud Assembly Facility in Louisiana to prepare for SLS Core Stage construction.

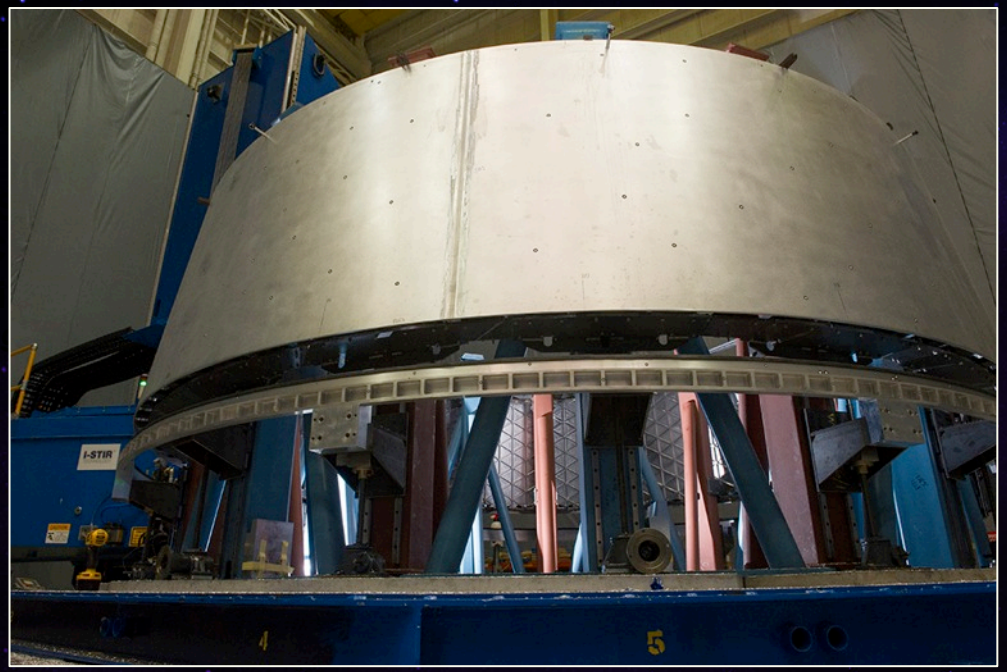
Systems Engineering & Integration Progress

The 70-metric-ton configuration of the SLS rocket, designed to carry the Orion spacecraft, completed 4 months of testing in Marshall's Trisonic Wind Tunnel in August 2012.



NASA's Space Launch System buffet model in NASA's Langley Researcher Center's Transonic Dynamics Tunnel in November 2012.

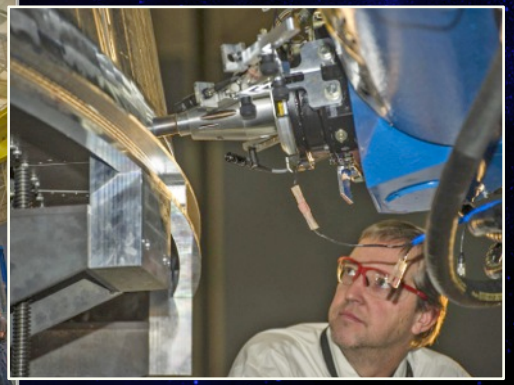
Spacecraft & Payload Integration Progress



Production of the first flight version of the Multi-Purpose Crew Vehicle to Stage Adapter at Marshall Space Flight Center in early 2013.

Delivering of rings for the MSA to Marshall in December 2012

Assembly of the MSA pathfinder during 2012

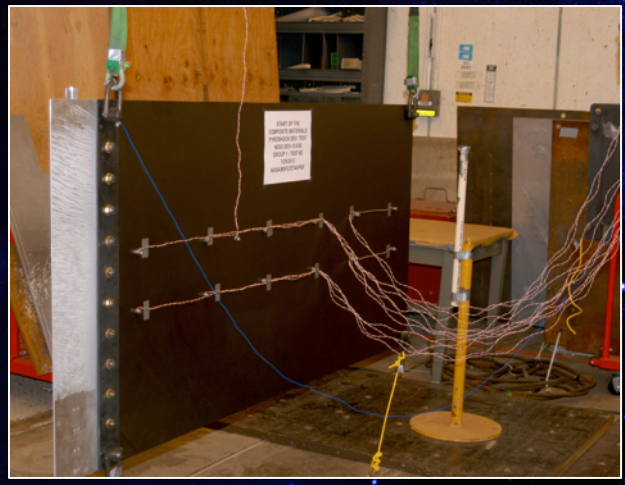


Advanced Development Progress

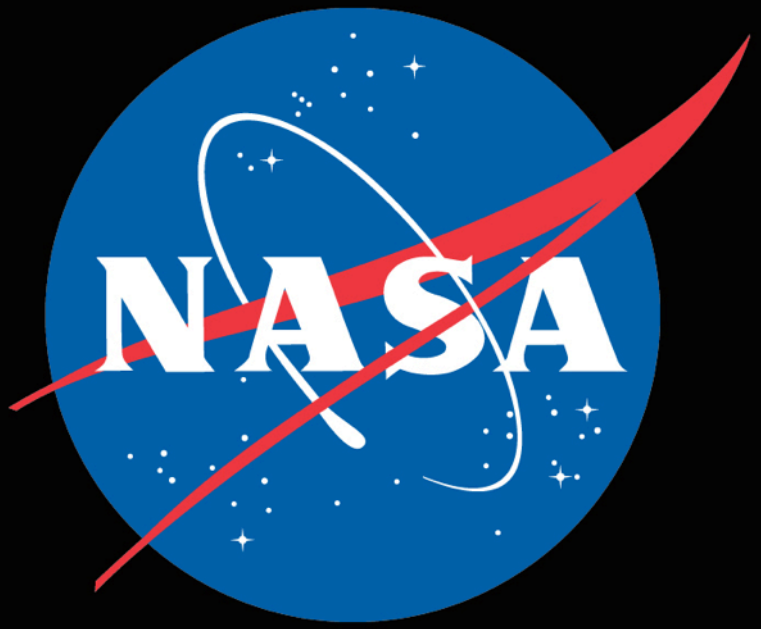
Advanced Booster Risk Reduction contracts awarded in October 2012; upper stage engine contracts awarded in January 2013

Selective Laser Melting equipment at MSFC in November 2012

F-1 engine gas generator hot fire test at Marshall Space Flight Center in January 2013



Pyroshock composite panel testing at MSFC in February 2012



Somewhere, something incredible is waiting to be known.

— Carl Sagan

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