

National Aeronautics and Space Administration



# SPACE LAUNCH SYSTEM

OCTOBER 2018

# INTERTANK: READY FOR JOINING

www.nasa.gov

## **INTERTANK PROGRESS**

The intertank that will fly on Exploration Mission-1 as part of NASA's new rocket, <u>SLS</u>, has completed avionics testing and now sits in a vertical stacking area at the Michoud Assembly Facility in New Orleans, where engineers will join it with two other large structures to form the top half of the <u>212-foot-tall core stage</u>. The intertank houses critical electronics that "talk to" the flight computers in the forward skirt, guiding the vehicle and directing its power during flight. The <u>avionics</u> units on the core stage work with the rocket's flight software to perform various functions during the first eight minutes of flight. Once the intertank and <u>forward skirt</u> are joined, they will be tested to verify they can successfully work together.

Read the full story: go.nasa.gov/2qLIIf7



### CORE STAGE PATHFINDER IS ON THE MOVE

Teams at NASA's Michoud Assembly Facility in New Orleans practiced moving the <u>SLS core stage pathfinder</u>, a full-scale replica of the rocket's core stage, to prepare for moving the real thing in 2019. Last year, the pathfinder traveled via barge from G&G Steel in Cordova, Alabama, where it was manufactured, to Michoud. After technicians complete their practice maneuvers at Michoud with the 212-foot pathfinder, NASA's barge Pegasus will transport it to Stennis Space Center near Bay St. Louis, Mississippi, to be lifted into the B-2 test stand for additional practice operations.

## ON THE PATH TO EXPLORATION MISSION-1

NASA continues to make steady progress toward the first missions of the Orion spacecraft and <u>SLS</u>, which will lead the next steps of human exploration to the Moon and beyond, extending human exploration farther into space than ever before. <u>Exploration Mission-1</u> will be the first integrated test of Orion, SLS and the supporting ground systems, launching from Kennedy Space Center in Cape Canaveral, Florida, in 2020. This flight will pave the road for future missions with astronauts.

#### Read the full story here: go.nasa.gov/2yXolOl

For more on how the SLS rocket is coming together, watch this video: bit.ly/2Oqa3vx



### **SLS ON THE ROAD**

#### WOMEN ENGINEERS LEARN ABOUT SLS AT CONFERENCE



Attendees at the Society of Women Engineers conference, WE18, gather around the SLS exhibit to learn more about the rocket. The conference drew more than 14,000 people to Minneapolis.

#### SYMPOSIUM TALK FOCUSES ON SLS MISSION POSSIBILITIES



Dr. Kimberly Robinson, SLS payloads manager, spoke at the 11th annual Wernher von Braun Memorial Symposium in Huntsville, Alabama, Oct. 24. She discussed the missions that are possible using the flexible architecture and unmatched performance of NASA's SLS rocket.

### WHAT'S NEW IN SLS SOCIAL MEDIA



### ROCKET SCIENCE IN 60 SECONDS

Tall as a three-story building, the SLS launch vehicle stage adapter connects the SLS's massive core stage with the in-space stage.

Watch the latest *Rocket Science* video here: **bit.ly/2EYDhIT** 



### I AM BUILDING SLS: JESSICA WOOD

Jessica Wood's NASA journey began with her grandmother, who worked for the National Advisory Committee for Aeronautics (NACA) in the 1940s before it became NASA. Jessica continues her grandmother's legacy by playing a part in making history with SLS as a powerhead lead for the RS-25 engine.

Read the full story: go.nasa.gov/2SzrKMB

### TWO MORE ENGINE TESTS IN THE BOOKS

NASA completed two successful, full-duration tests on the RS-25 engine in October at Stennis Space Center, Oct. 11 and Oct. 31. The Oct. 31 test was the fifth hot fire in an engine test series that began in August. The tests are evaluating new flight controllers, a main combustion chamber manufactured with a new hot isostatic pressure (HIP) bonding technique and a <u>3D-printed pogo accumulator</u>.

Read the full story here: go.nasa.gov/2PwhtID

#### **SPACEFLIGHT PARTNERS:** *MT Aerospace*

NUMBER OF EMPLOYEES: About 500

LOCATION: Augsburg, Germany

#### WHAT THEY DO FOR SLS:

MT manufactures the pie-shaped Gore Panels that make up the liquid hydrogen domes and liquid oxygen domes. MT has delivered all gores for qualification hardware, and for NASA's first two SLS missions. Also, MT is supplying hardware for the exploration upper stage (EUS) development dome.



#### FOLLOW THE PROGRESS OF NASA'S NEW LAUNCH VEHICLE FOR DEEP SPACE:

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#### **COMING NEXT MONTH:**

Liquid Hydrogen Tank Structural Test Article Nears Completion

EM-1 Booster Motor Segments Finished

Core Stage Components Come Together