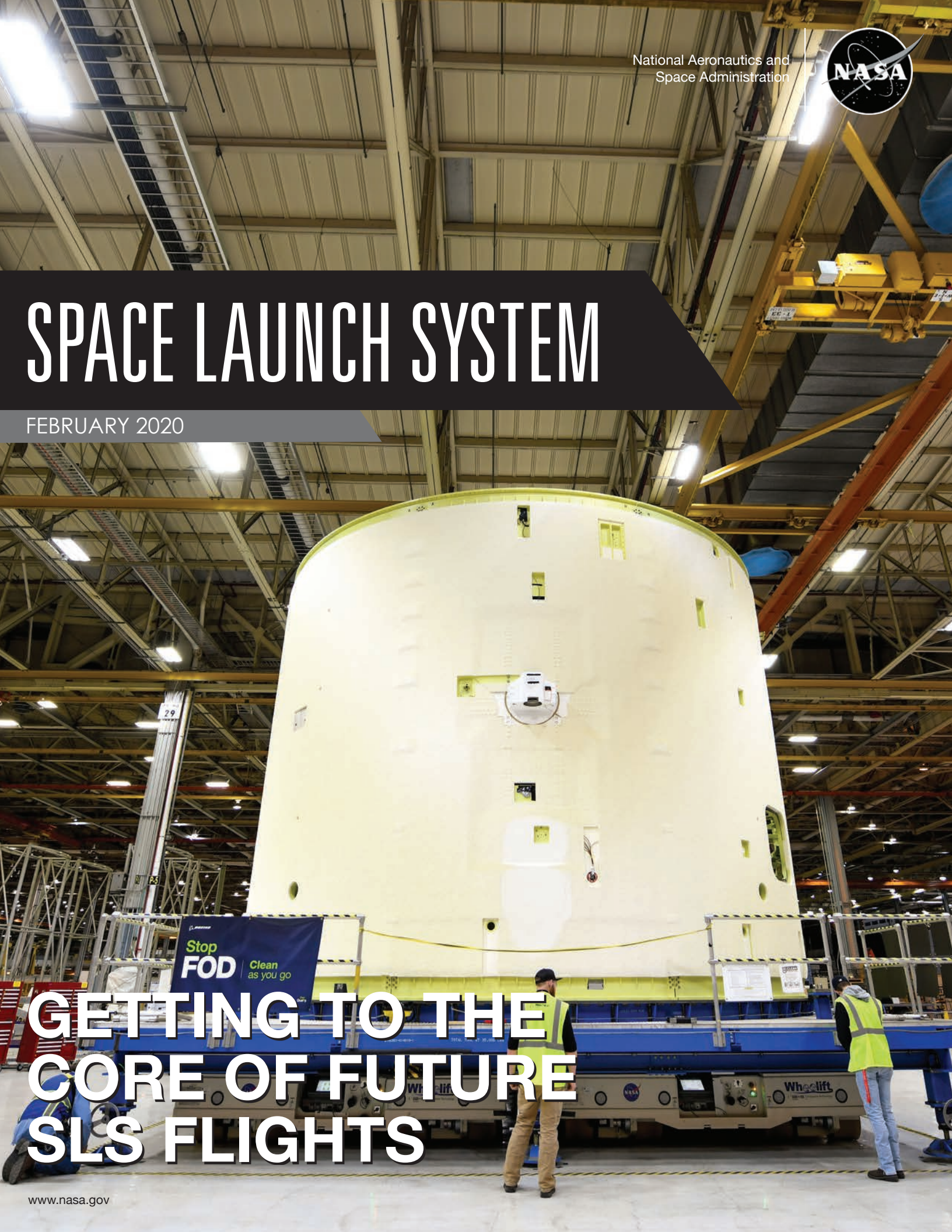
National Aeronautics and Space Administration

NASA

SPACE LAUNCH SYSTEM

FEBRUARY 2020



GETTING TO THE CORE OF FUTURE SLS FLIGHTS

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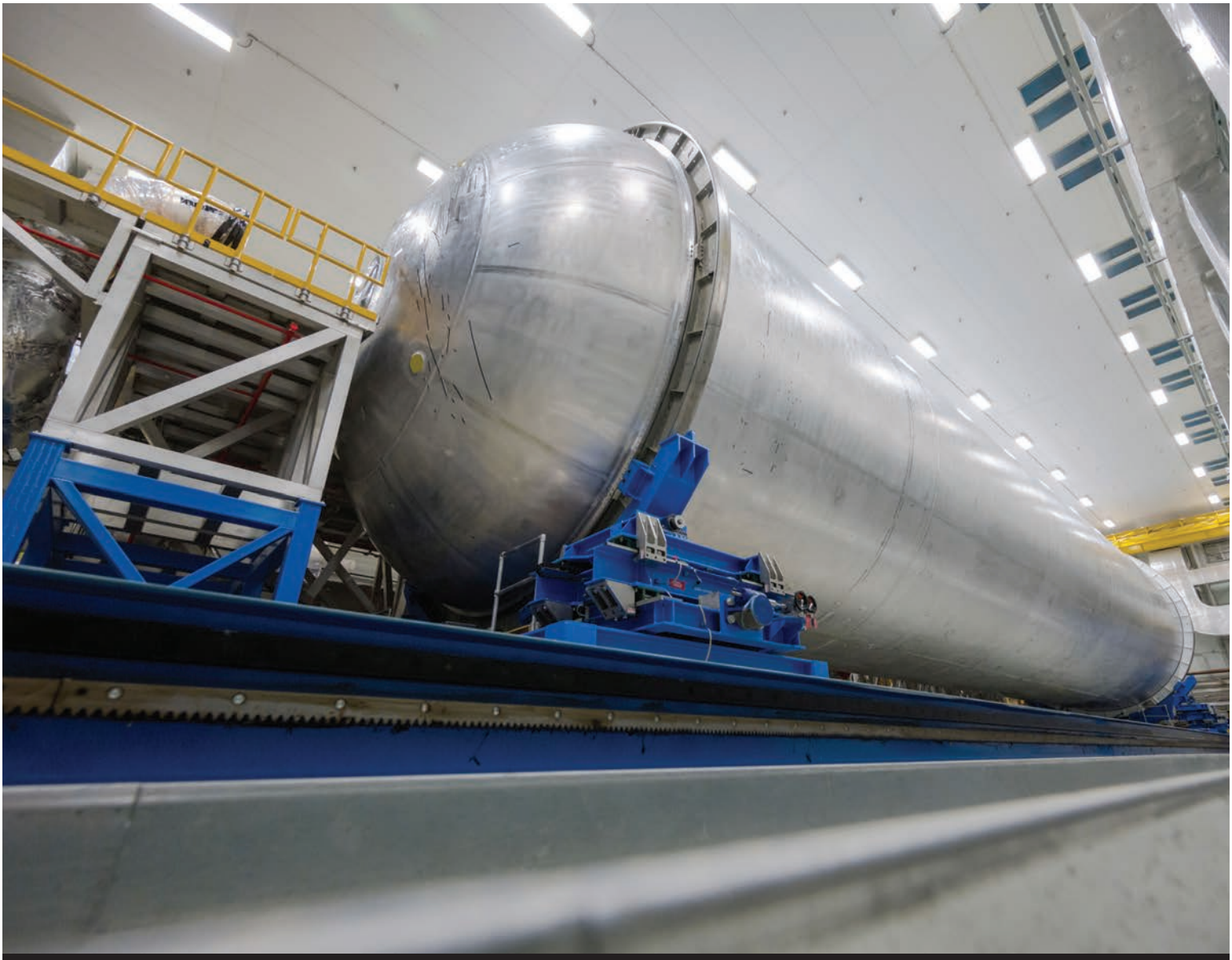
TEAMS BUILD CORE STAGE HARDWARE FOR 2ND AND 3RD SLS FLIGHTS



The liquid hydrogen tank for the third SLS core stage is in production at Michoud Assembly Facility.

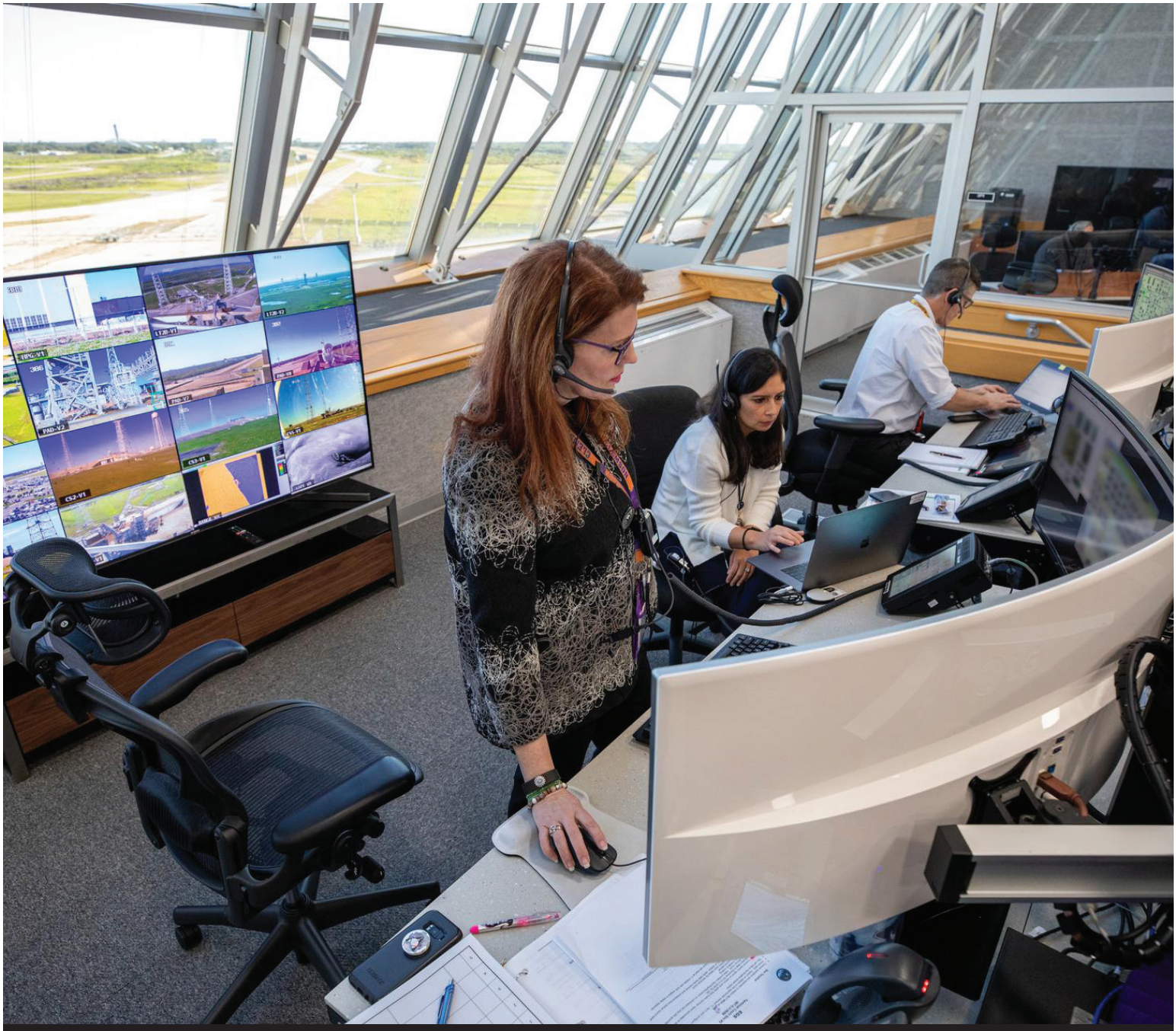
While the core stage that will power the Artemis I mission is undergoing a final series of tests at Stennis Space Center, hardware for the second and third SLS flights is well underway.

NASA and Boeing teams at Michoud Assembly Facility near New Orleans have built the major components of the Artemis II core stage. The liquid hydrogen tank is welded together and undergoing nondestructive evaluation. The liquid oxygen tank is being primed for thermal protection application. The Intertank (shown on the cover) has completed thermal protection application and is in mechanical assembly, and the engine section is undergoing mechanical integration and orbital welding.

The core stage for the third SLS flight is also in production. The liquid hydrogen tank was originally built for the first core stage, but was shelved because welds did not meet strength requirements. After studying repair techniques to strengthen the welds, the tank has re-entered production and will be proof tested for strength.

This year will be a busy one for NASA as the agency builds momentum to land the first woman and next man on the Moon. Learn more about NASA's plans for 2020 and beyond: **youtu.be/3P0EUBrWh50**

SIMULATING SUCCESS FOR THE ARTEMIS I LAUNCH



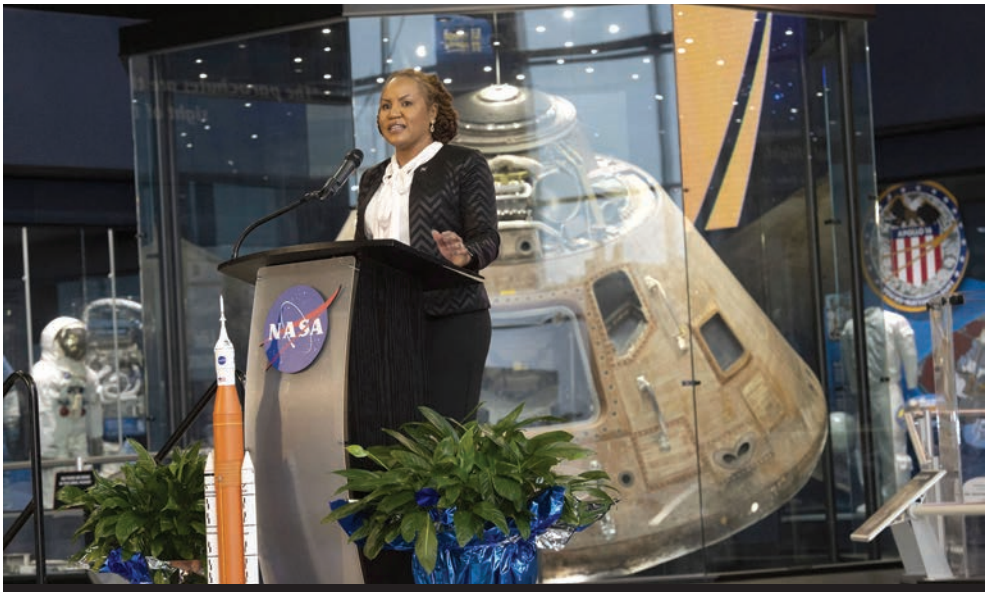
Artemis I Launch Director Charlie Blackwell-Thompson, left, stands at a launch console inside the Launch Control Center's Firing Room 1 at Kennedy Space Center in Florida during a countdown simulation with team members Jessica Parsons and Jeremy Graeber.

As NASA lays the foundations for the agency's Artemis lunar exploration program, the Exploration Ground Systems team of launch controllers who will oversee the countdown and liftoff of the first flight of the SLS rocket and Orion spacecraft are practicing – and perfecting – the procedures required for a successful launch. It's a time-tested method NASA has used to hone launch teams' skills during all the agency's human spaceflight programs.

The Artemis I launch team at Kennedy Space Center in Florida is simulating critical portions of the countdown to ensure everyone is ready to handle any situation launch day may throw their way. Under the leadership of Artemis I Launch Director Charlie Blackwell-Thompson, the team gathered at consoles inside the Launch Control Center's Firing Room 1 on Feb. 3 for a run-through of the terminal count – the final stretch of the countdown that ends with solid rocket booster ignition.

Read the full story: **go.nasa.gov/2vuOlTR**

SMALL BUSINESSES GATHER TO LEARN ABOUT ARTEMIS MISSION OPPORTUNITIES

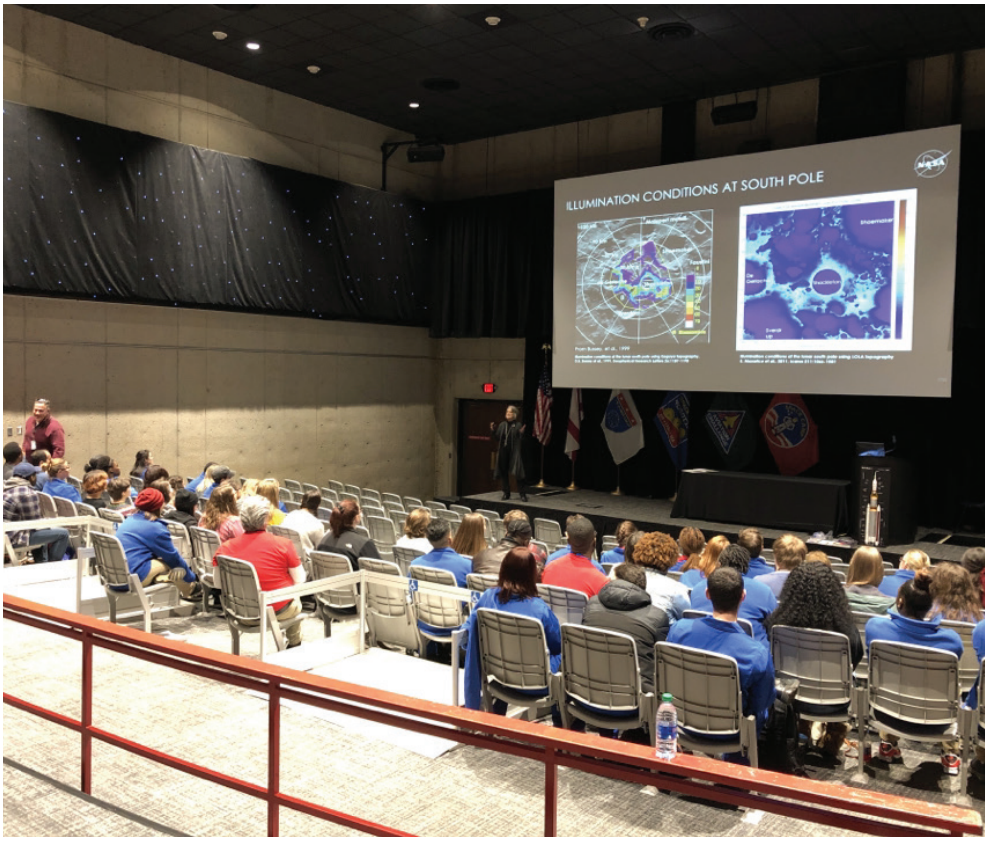


Monica Manning, assistant administrator of NASA's Office of Procurement, addresses a crowd of nearly 900 industry leaders from 33 states at the Marshall Small Business Alliance meeting Feb. 20 at the U.S. Space & Rocket Center in Huntsville, Alabama.

As NASA prepares to send astronauts to explore the Moon and Mars, hundreds of small business leaders gathered at the U.S. Space & Rocket Center to learn how they can support Artemis missions under a new contracting model for managing mission support. Held Feb. 20, leadership from NASA Headquarters and NASA's Marshall Space Flight Center presented the new model, which better aligns the people, processes, procurements and policies of mission support.

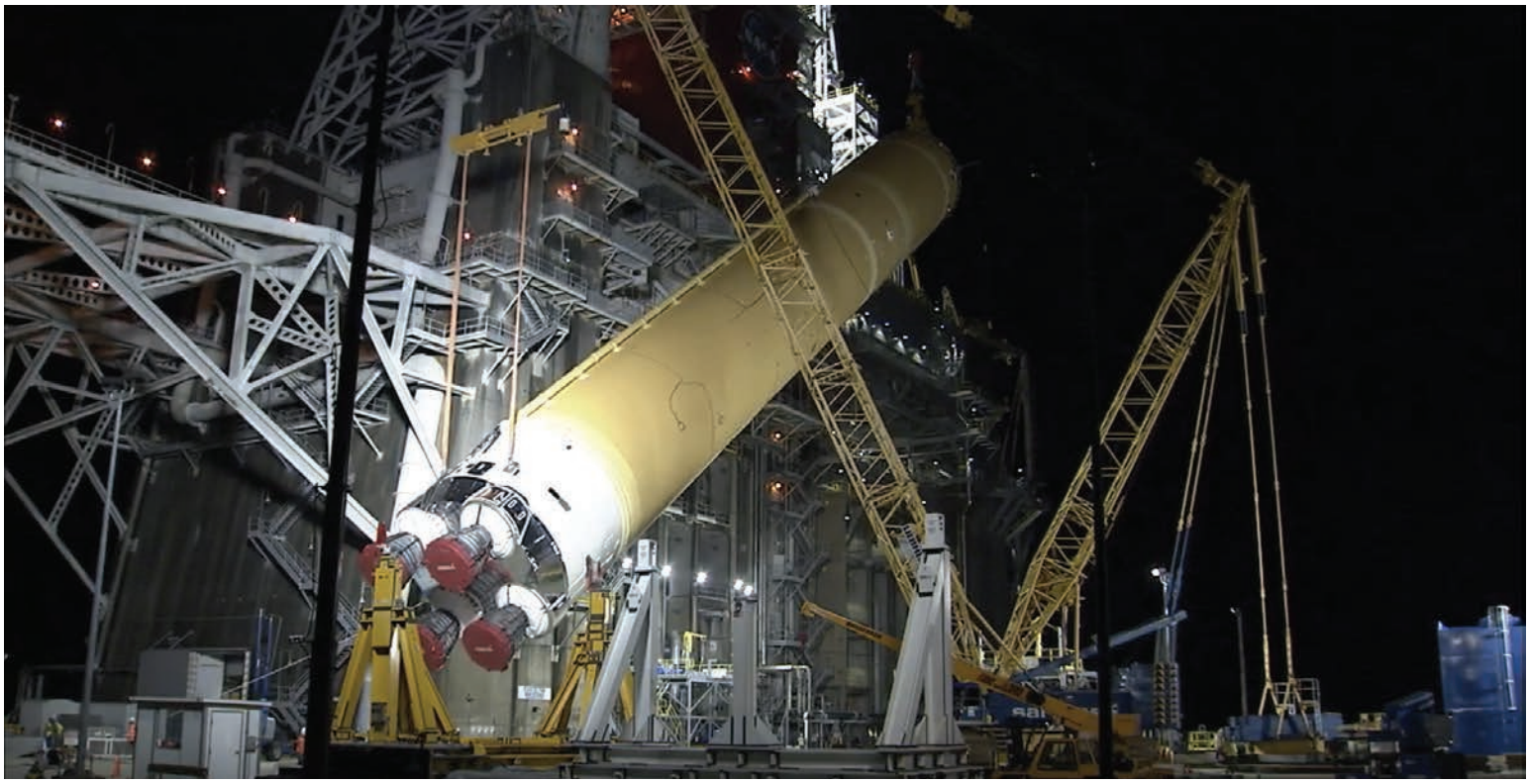
Read the full story: **go.nasa.gov/38k3pRp**

SLS ON THE ROAD

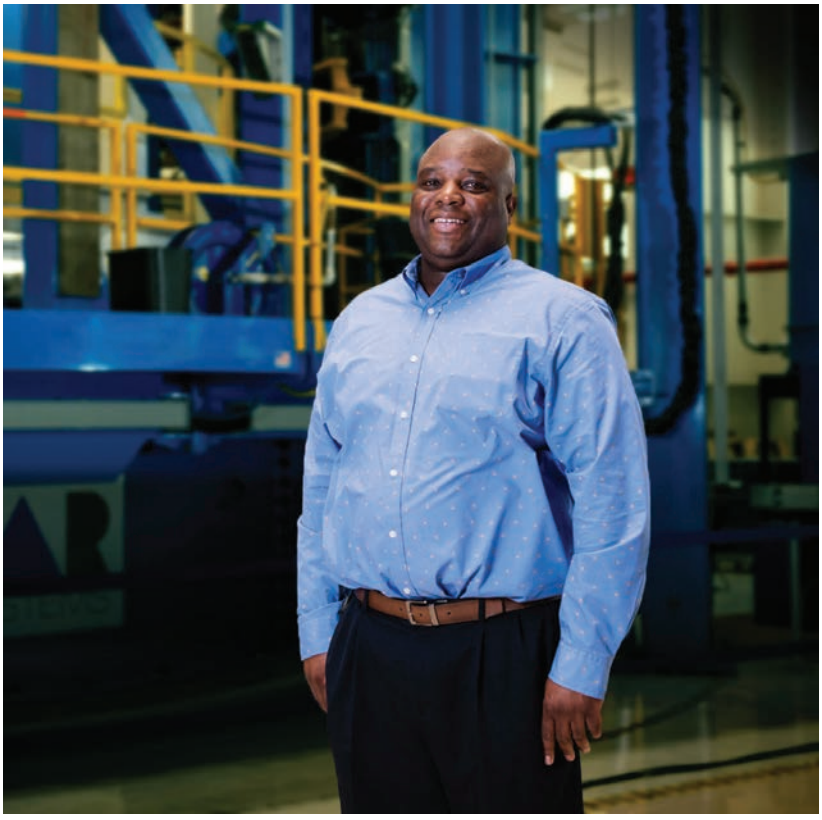


Space Camp Crew Trainers at the U.S. Space & Rocket Center (USSRC) learned about SLS and NASA's plan to return to the Moon as part of their intense training program before taking teams. The Feb. 14 briefing wrapped up a two-week training program, with future counselors learning the history and future of space exploration, and training for simulated space missions and robotics labs before they take their first team of 16 Space Campers. The crew trainers are on the front line working with at least 16 space campers each week throughout the year in the USSRC's world-renowned informal education programs. Students from every state in the nation and more than 63 international countries will attend the programs this year.

WHAT'S NEW IN SLS SOCIAL MEDIA



The massive SLS core stage that will launch the Artemis I mission was loaded onto NASA's Pegasus barge and shipped from Michoud Assembly Facility to Stennis Space Center in January in preparation for the Green Run test series. This time-lapse video shows the process from start to finish. Watch the video: **youtu.be/t45mQX4fgBg**



I AM BUILDING SLS: HANSEL GILL

Hansel Gill started his NASA career as a summer intern, just two weeks after he graduated from high school. By the end of that summer, he knew he wanted to spend his career at the agency. Today, he is the subsystem manager for manufacturing and production for the exploration upper stage of the SLS rocket. Working with teams at Marshall Space Flight Center and Michoud Assembly Facility, his job has him in the front row as blueprint designs transform into actual hardware for the rocket that will launch NASA's first Artemis missions – and astronauts – to the Moon.

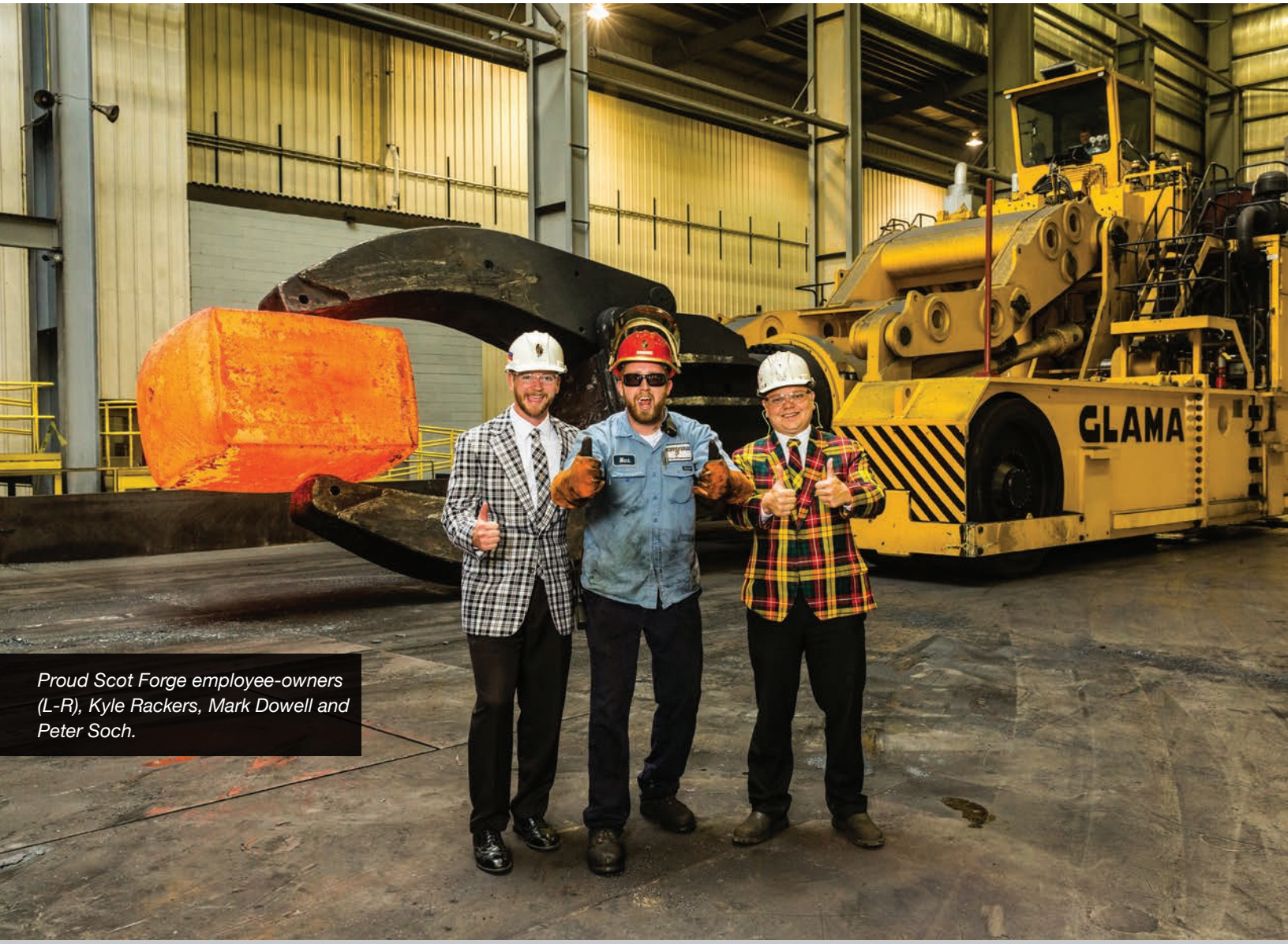
Read the full story: **go.nasa.gov/32G9Ywz**

SPACEFLIGHT PARTNERS: *Scot Forge Co.*

NUMBER OF EMPLOYEES: *562*

LOCATION: *Spring Grove, Illinois*

WHAT THEY DO FOR SLS:
Starting as a small hammer shop in Chicago in 1893, Scot Forge is proud to be a 100 percent employee-owned American manufacturer. With five U.S. facilities and 500-plus employee-owners, Scot Forge offers the most modern open-die and rolled-ring forging, machining and downstream capabilities in North America. The company has a 127-year track record of success focused on solving customers' greatest challenges. From the wheels of NASA's Curiosity Mars Rover, to mission critical components for nuclear submarines, to large hydraulic cylinders for the largest mining trucks on the planet, Scot Forge creates the precision forged metal parts used in demanding applications all over the world. In support of SLS, Scot Forge supplies forged metal components used across the launch vehicle, from the propulsion side of the rocket up to the payload. Recently the company was selected to produce the aft dome and nozzle hardware for the Booster Obsolescence and Life Extension (BOLE) effort to develop next-generation boosters for SLS.



Proud Scot Forge employee-owners (L-R), Kyle Rackers, Mark Dowell and Peter Soch.

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