



EXPLORATION GROUND SYSTEMS

HIGHLIGHTS

NOVEMBER 2017

ULA
America's Ride to Space

**INTERIM CRYOGENIC
PROPULSION STAGE**

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ULA

ICPS TURNED OVER TO EXPLORATION GROUND SYSTEMS

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Check out the EGS 2016 Year in Review at <http://go.nasa.gov/2IT52Pe>

MESSAGE FROM THE DIRECTOR

It's been another exciting year for the GSDO program!

While 2017 has been full of challenges and opportunities, I am really proud of how the Kennedy team has responded to those challenges and I love to see this team rally around each other in support and in celebration as we achieve our goals.

As we enter 2018, our construction projects are fundamentally complete; we are deploying and testing our ground systems; we have delivered much of our critical software; and our operations team is readying to process and launch America's next great launch vehicle and spacecraft.

The year 2018 also marks the end of the very successful 21st Century Program that implemented many of the investments that have enabled KSC to become the multi-user spaceport that it is today. As that program ends, we are retiring the name of GSDO and officially transitioning to Exploration Ground Systems (EGS) so that we are aligned with the program's congressional appropriation. The EGS team will continue the steady progress forward as we work with the SLS and Orion teams to unlock access to deep space.

I am grateful and excited to be making spaceflight history with you!





A ceremony on Nov. 7, 2017, marked the agency's Spacecraft/Payload Integration and Evolution (SPIE) organization formally turning over processing of the Space Launch System (SLS) rocket's Interim Cryogenic Propulsion Stage (ICPS), to the center's Exploration Ground Systems. The ICPS is seen on the left in its shipping container and is the first integrated piece of flight hardware to arrive in preparation for the uncrewed Exploration Mission-1. With the Orion attached, the ICPS sits atop the SLS rocket and will provide the spacecraft with the additional thrust needed to travel tens of thousands of miles beyond the Moon. Photo credit: NASA/Bill White

FIRST SLS ROCKET HARDWARE TURNED OVER TO GROUND SYSTEMS

NASA recently marked another key milestone in preparation for human [deep space exploration near the Moon](#). Officials with the [Space Launch System](#) (SLS) Spacecraft/Payload Integration and Evolution organization formally turned over processing of the rocket's [interim cryogenic propulsion stage](#) (ICPS) to the center's Exploration Ground Systems at NASA's Kennedy Space Center. The SLS is a new heavy-lift rocket designed to send astronauts aboard the [Orion](#) spacecraft beyond low-Earth orbit to the vicinity of the Moon, and ultimately the Red Planet.

During a recent ceremony in the high bay of the spaceport's Space Station Processing Facility, Mike Bolger, manager, EGS at Kennedy, noted the ICPS is the first piece of hardware being turned over for processing in preparation for the first integrated flight of SLS and Orion, which is an uncrewed mission known as Exploration Mission-1.

"It's great to be standing in front of flight hardware," he said. "Over the next year, the components of the most powerful rocket in the world will be delivered to the Kennedy Space Center." John Honeycutt, SLS program manager at NASA's Marshall Space Flight Center in Huntsville, Alabama, thanked the Kennedy team for years of effort preparing the Florida spaceport's facilities for processing SLS and Orion.

"I've seen all your hard work that you're doing relative to the accomplishments you've made in the [Vehicle Assembly Building](#), on the [mobile launcher](#) and out at the [launch pad](#)," Honeycutt said. "We're looking forward to getting you some more pieces of hardware to start moving over to the VAB so you can put the rocket together."

Read the full story at <https://go.nasa.gov/2htxnKE>.

Samantha Fore

EGS Deputy Chief Engineer, Engineering Directorate



Samantha Fore is the Exploration Ground Systems (EGS) deputy chief engineer in the Engineering Directorate at NASA's Kennedy Space Center in Florida.

She represents the Engineering Technical Authority as part of NASA's system of checks and balances. Her main responsibilities include independent oversight of the EGS Program in support of safety and mission success.

She arrived at Kennedy in 2005 after working for five years as a propulsion flight controller at Johnson Space Center in Houston. At Kennedy, she started as a main propulsion/space shuttle main engine engineer. From there, Fore worked with the NASA Engineering and Safety Center on a cradle-to-grave project designing and testing a launch abort system. Following that, she worked for the Launch Vehicle Processing chief engineer.

"I wanted to remain part of human spaceflight after the Space Shuttle Program and that is what led me to want to support EGS," Fore said.

One of her most memorable highlights is having the opportunity to view launches and to be part of future launches. "It never gets old," Fore said.

"There wasn't really a defining moment when I became interested in space. I'd say I had an interest in it ever since I was young, like most people do. Luckily, I was able to make a career out of it," Fore said.

The advice she would give to students who are interested in a career similar to hers is to talk to people to find out what opportunities are out there, decide what fits you best and lay out a plan to achieve your goal.

Her hometown is Chicago, Illinois. She earned a Bachelor of Science in aeronautical and astronautical engineering from the University of Illinois at Urbana-Champaign in 2000 and a Master in industrial engineering from the University of Central Florida in 2011.

Fore has been married to her husband Mike for almost seven years. They have three children, Evan, 23, Caleb, 5, and Gavin, 3. Her first car was a blue 1994 Ford Explorer. Fore's interests include yoga and traveling. She has traveled to New Zealand, Hawaii, Bermuda and Ireland.

"I would like to travel to the Mediterranean and Bora Bora, a small island in French Polynesia," Fore said.



PREPARING FOR UNDERWAY RECOVERY TEST-6

When NASA's Orion spacecraft returns to Earth following Exploration Mission-1 (EM-1) in 2019, it will splashdown in the Pacific Ocean, 30-50 nautical miles off the coast of San Diego, where Orion — the crew module — its parachutes and its forward bay cover will be recovered with the help of the U.S. Navy. To prepare for that recovery, NASA, Detachment 3, the Navy and Lockheed Martin, the Orion prime contractor, have been working together to develop the procedures and hardware necessary to safely recover Orion, not only after this uncrewed flight, but also following future human mission. The teams are currently preparing for Underway Recovery Test-6 that will take place off the coast of San Diego in mid-January. Photo credit: NASA/Bill White

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