Here's some of the stories trending This Week at NASA!

3-2-1 and liftoff at dawn, the dawn of Orion and a new era of American space exploration.

The successful first flight test of NASA's Orion spacecraft on Dec. 5 not only was a historic moment for the agency – but also was a critical step on NASA's Journey to Mars.

Orion rode to space from Cape Canaveral Air Force Station on a Delta IV heavy rocket with no crew, but loaded with about 1,200 sensors.

The flight test basically was a compilation of the riskiest events that will happen when astronauts fly on Orion on deep space missions.

These include radiation, which Orion encountered as it passed through Earth's Van Allen belts.

"A human rated system hasn't gone that far since 1972.

And in fact that mission was Apollo 17 which launched December 7th – you know here we
are again, the United States leading exploration.”

But surviving the 4,000-plus degree Fahrenheit temperatures generated on Orion’s return to Earth – its so-called trial by fire – was one of the flight’s most crucial tests.

“The first look looks really good from a data standpoint, but we’ll dig through all of the data and make sure that everything is there.

We’ll definitely learn some things from this flight – that’s why it was a test flight – it will really help us as we take those next steps into the solar system with humans.”

As planned, two orbits and about four-and-a half hours after launch, Orion splashed down in the Pacific Ocean ... successfully ending its first flight – while at the same time,

providing forward momentum for NASA’s Journey to Mars.

“This, like I say is serial number 0-0-1 of a storied fleet of vehicles and when we
look back twenty or thirty years from now
we can trace it all back to the day where

it started out with Orion serial number 0-0-1.”

A panel discussion on Dec. 2 featured NASA
leaders at Kennedy Space Center and at headquarters,

discussing what’s next on the Journey – including
the new technologies and capabilities being
developed to send astronauts farther than
ever before, first to an asteroid, and then

on to the Red Planet.

The barrel for the engine section of NASA’s
new Space Launch System rocket recently was
taken off the Vertical Weld Center tool at
the Michoud Assembly Facility, in New Orleans.

The barrel is flight hardware to be used on
Exploration Mission-1, the first uncrewed
test flight of the 70-metric-ton configuration
of the SLS.

The barrel and a ring will house four RS-25
engines that will power the core stage of

the SLS.
NASA has approved the completion of the first milestone in the Boeing Company’s path toward launching NASA astronauts to the International Space Station from U.S. soil again, under a groundbreaking Commercial Crew Transportation Capability (CCtCap) contract.

The Certification Baseline Review established a baseline design that includes Boeing’s CST-100 spacecraft, a United Launch Alliance Atlas V rocket, and associated ground and mission operations systems.

On Sept. 16, the agency unveiled its selection of Boeing and SpaceX to transport U.S. crews to and from the space station using their CST-100 and Crew Dragon spacecraft, respectively.

And that’s what’s up this week @NASA ...

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