

NASA scrubs Orion launch; will try again Friday (Update)

December 4 2014, by Marcia Dunn



The NASA Orion space capsule is seen atop a Delta IV rocket ready for a test launch at the Cape Canaveral Air Force Station, Wednesday, Dec. 3, 2014, in Cape Canaveral, Fla. The test flight scheduled for Thursday morning, will reach an altitude of 3,600 miles before re-entering the atmosphere (AP Photo/Chris O'Meara)

Wind gusts and sticky fuel valves conspired to keep NASA's new Orion spacecraft on the launch pad Thursday, delaying a crucial test flight meant to revitalize human exploration.

NASA promised to try again Friday morning, as tens of thousands of disappointed and weary launch guests hustled out.

"I'm running on no hours of sleep, zero, zero hours," said Sarah McNulty, a space educator who was helping NASA escort the several-hundred news media on hand. She said she'd be back again by sunrise, "bright and early."

NASA's new countdown clock got a workout as problem after problem cropped up in the final four minutes, and the count switched back and forth.

The space agency's new countdown clock got a workout as problem after problem cropped up in the final four minutes, and the count switched back and forth.

A stray boat in the launch-danger zone kicked things off badly. Then excessive wind twice halted the countdown, followed by valve trouble on the unmanned Delta IV rocket that could not be fixed in time. Declining battery power in the rocket's video camera system reinforced the decision to quit for the day.

"It was a roller coaster: We're going, we're not going," McNulty said. "But that's how the launch business is."

Orion is how NASA hopes to one day send astronauts to Mars. This inaugural flight, while just 4½ hours, will send the unmanned capsule

3,600 miles (5,800 kilometers) into space.



The service structure is rolled away from NASA's Orion spaceship early Thursday, Dec. 4, 2014, in Cape Canaveral, Fla. Orion is scheduled to lift off later this morning on a United Launch Alliance Delta 4-Heavy rocket on its first unmanned orbital test flight. (AP Photo/Chris O'Meara)

It's the first attempt to send a spacecraft capable of carrying humans beyond a couple hundred miles of Earth since the Apollo moon program.

The ultimate goal, in the decades ahead, is to use Orion to carry people to Mars and back.

An estimated 27,000 guests gathered for the historic send-off—roads leading into Kennedy Space Center were packed well before dawn—and the atmosphere was reminiscent of the shuttle-flying days. "Go Orion!!"

urged a hotel billboard in nearby Cocoa Beach.

A Thursday launch would have been special for another reason: NASA launch commentator Mike Curie noted that it was the 16th anniversary of the launch of the first U.S. piece of the International Space Station, by shuttle Endeavour. "That was the beginning of the space station, and today is the dawn of Orion," he said.

Orion is aiming for two orbits on this inaugural run. On the second lap around the home planet, the spacecraft should reach a peak altitude of 3,600 miles, high enough to ensure a re-entry speed of 20,000 mph (32,200 kph) and an environment of 4,000 degrees (2,200 Celsius). Splashdown will be in the Pacific off the Mexican Baja coast, where Navy ships already are waiting.

NASA's Mission Control in Houston was all set to oversee the entire 4½-hour operation once the rocket was in flight. The flight program was loaded into Orion's computers well in advance, allowing the spacecraft to fly essentially on autopilot. Flight controllers could intervene in the event of an emergency breakdown.

The spacecraft is rigged with 1,200 sensors to gauge everything from heat to vibration to radiation. At 11 feet (3.4 meters) tall with a 16.5-foot (5-meter) base, Orion is bigger than the old-time Apollo capsules and, obviously, more advanced. As NASA's program manager Mark Geyer noted, "The inside of the capsule is totally different."



The service structure is rolled away from NASA's Orion spaceship late Wednesday, Dec. 3, 2014, in Cape Canaveral, Fla. Orion is scheduled to lift off Thursday morning on a United Launch Alliance Delta 4-Heavy rocket on its first unmanned orbital test flight. (AP Photo/Chris O'Meara)

NASA deliberately kept astronauts off this first Orion.

Managers want to test the riskiest parts of the spacecraft—the heat shield, parachutes, various jettisoning components—before committing to a crew. The earliest Orion might carry passengers is 2021; asteroids are on the space agency's radar sometime in the 2020s and Mars, the grand prize, in the 2030s.

Lockheed Martin Corp., which is handling the \$370 million test flight for NASA, opted for the powerful Delta IV rocket this time around. Future Orion missions will rely on NASA's still-in-development megarocket known as SLS, or Space Launch System. The first Orion-SLS combo launch is targeted for 2018.



In a photo provided by NASA, the Orion space capsule is seen atop a Delta IV rocket ready for a test launch at the Cape Canaveral Air Force Station, Wednesday, Dec. 3, 2014, in Cape Canaveral, Fla. The test flight scheduled for Thursday morning, will reach an altitude of 3,600 miles before re-entering the atmosphere (AP Photo/NASA, Bill Ingalls)

NASA's last trip beyond low-Earth orbit in a vessel built for people was Apollo 17 in December 1972.

"It's a thrilling prospect when you think about actually exploring the solar system," space station commander Butch Wilmore said from orbit as the Orion countdown entered its final hour. "Who knows where it will take us, who knows where it will go. We'll find out as time goes forward, but this first step is a huge one."

NASA's new countdown clock got a workout Thursday morning. First a stray boat in the danger zone halted the countdown, then gusty winds held everything up with less than four minutes to go. A new launch time was set nearly an hour later, only to be held up again by winds.

More information: NASA: www.nasa.gov/orion/

Lockheed Martin: www.lockheedmartin.com/us/ssc/orion-eft1.html

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