

# NASA begins countdown for Thursday launch try

February 21 2011, By MARCIA DUNN , AP Aerospace Writer

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STS-133 commander Steve Lindsey, right, straps himself into a Shuttle Training Aircraft at Kennedy Space Center's Shuttle Landing Facility in Cape Canaveral, Fla., Monday, Feb. 21, 2011. The space shuttle Discovery and her crew of six astronauts is scheduled to lift off Thursday afternoon on an 11-day mission to the international space station. (AP Photo/Chris O'Meara)

(AP) -- After a four-month grounding of the space shuttle fleet, NASA's countdown clocks started ticking again Monday for Discovery's final ride into orbit.

Discovery is scheduled to blast off Thursday afternoon to the [International Space Station](#). Forecasters put the odds of good weather at 80 percent.

When NASA tried to launch Discovery in early November with supplies and a [humanoid robot](#) for the space station, the countdown never got past

the fueling phase. A [hydrogen gas](#) leak halted everything, then a more insidious problem cropped up: cracks in the [external fuel tank](#).

The shuttle team went into overdrive to fix all the cracks in the metal struts, located on the central portion of the tank, and to reinforce the rest of the area. The problem increased the risk of broken insulating foam, the very issue that doomed Columbia in 2003.

"Discovery has been a really remarkable vehicle for us," NASA test director Jeff Spaulding told reporters Monday. "She still has a few more miles to go before she sleeps, though. She's taken us on many amazing journeys throughout the years, and we expect this flight to be no different than any of those."

Commander Steven Lindsey and his crew expressed gratitude for the unprecedented repairs. After arriving at Kennedy Space Center over the weekend, Lindsey called the cracking problem "probably one of the most difficult, technical challenges we've faced in recent years."

The other challenge for the six-person crew, he noted, was the loss of the mission's lead spacewalker.

Astronaut Timothy Kopra was replaced last month after he was hurt in a bicycle crash. Stephen Bowen, an experienced spacewalker, took over. "I've got big shoes to fill," Bowen said Sunday.

Because of the delay, Discovery has spent more time awaiting liftoff in the Vehicle Assembly Building and at the pad than all but one other [shuttle mission](#). Columbia set the record at 183 days in 1990. If Discovery soars Thursday, it will come in at 170 days.

Following this 11-day mission, Discovery will be retired and sent to a museum. Its final destination is expected to be the Smithsonian

Institution. It is the oldest of the surviving space shuttles.

Only two other shuttle flights remain, by Endeavour in April and Atlantis at the end of June.

NASA is under presidential direction to turn over orbital trips to private business and focus on expeditions to asteroids and Mars. Until private spacecraft are ready to start hauling up space station crews, U.S. astronauts will have to continue hitching rides on Russian Soyuz capsules for a steep price.

Spaulding said it's a bittersweet time for the team that has prepared Discovery for liftoff for so many decades. While it's sad to say goodbye to shuttle flying, "everybody's proud in what they've done and they're really happy to see her go off on this last mission."

Since its first flight in 1984, Discovery has logged nearly 143 million miles in space, with another 4.5 million miles expected during its upcoming journey. It carried up the Hubble Space Telescope in 1990, returned John Glenn to orbit in 1998, and got shuttles flying again after the deadly Challenger and Columbia tragedies.

**More information:** NASA:

<http://www.nasa.gov/mission-pages/shuttle/main/index.html>

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