

Discovery to dock with International Space Station

February 26 2011, by Kerry Sheridan



Space shuttle Discovery lifts off from Pad 39A at the Kennedy Space Center in Cape Canaveral, Fla., Thursday, Feb. 24, 2011. Discovery on its last mission to the International Space Station.(AP Photo/John Raoux)

The US space shuttle Discovery was poised to reach the International Space Station on Saturday as part of its final mission, carrying a new module and a robot to the orbiting research lab.

The shuttle, which blasted off from the Kennedy Space Center on Thursday, is set to dock with the ISS at 2:15 pm (1915 GMT). Discovery's 11-day tour of duty in low Earth orbit is to include two spacewalks.

Late Friday, NASA said the astronauts had inspected the orbiter's thermal protection system and had checked out spacesuits and

rendezvous tools in preparation for Saturday's docking.

The Discovery crew plans to deliver the Permanent Multipurpose Module, with extra storage space and an area for experiments, as well as some spare parts and the Express Logistic Carrier, an external platform for large equipment.

The shuttle will also bring the first humanoid robot to the ISS. The Robonaut 2, or R2, is a joint project of General Motors and NASA and will stay behind as a permanent resident of the space station when the shuttle leaves.

The Discovery crew awoke to music at 1153 GMT, NASA said Saturday.

The space craft "will arrive at a point about 600 feet (183 meters) directly below the station about an hour before docking," NASA said, and Commander Steve Lindsey "will execute the rendezvous pitch maneuver, a one-degree-per-second rotational 'backflip.'"

This will allow ISS crew members to photograph in minute detail the shuttle's heat shield for experts to scrutinize for any sign of damage.

Once the rotation is completed, Lindsey will fly the shuttle in front of the station, dock Discovery, and some two hours later, at 2118 GMT, hatches are scheduled to open between the two spacecraft.

When Discovery wraps up this tour, the oldest surviving shuttle will have flown more missions than any of its cohorts and transported 180 people into space, including the first female shuttle commander and the first African-American spacewalker.

The other two shuttles are scheduled for their final flights later this year:

Endeavour on April 19 and Atlantis on June 28.

Discovery has broken new ground multiple times since it first launched in 1984. It has transported the Hubble Space telescope, was the first to rendezvous with the Russian Mir Space Station, and delivered part of the Japanese Kibo lab to the ISS.

Discovery has circled the globe more than 5,600 times and logged 142 million miles (230 million kilometers) over its 352 days in space.

The shuttle was also the first to return to space after two major disasters: the Challenger explosion in 1986 and the Columbia disaster in 2003, when the shuttle broke up on its return toward Earth.

The end of the shuttle program will create a gaping hole in the US space program during a period of belt-tightening and budget freezes, and will leave Russia's space capsules as the sole transit option to the ISS.

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