

NASA to ship fuel tank for the last planned shuttle flight

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Space shuttle Discovery inside the cavernous Vehicle Assembly Building. Work platforms are lowered all around the spacecraft to give technicians access to the various systems and components as they attach the orbiter to the rest of the stack and prepare it for launch. Discovery is targeted for launch Nov. 1 on the STS-133 mission. Photo credit: NASA/Dimitri Gerondidakis

(PhysOrg.com) -- The external fuel tank that will power the last planned space shuttle into orbit will be shipped Tuesday to NASA's Kennedy Space Center in Florida.

The tank has been restored to flight configuration at NASA's Michoud Assembly Facility in New Orleans after sustaining damage during Hurricane Katrina in 2005.

The tank, designated ET-122, will support shuttle Endeavour's flight

targeted for launch in February.

At Michoud, ET-122 was rolled out to an enclosed barge, which will carry the tank 900 miles to Kennedy Space Center during a five to six-day sea journey. ET-122 is expected to arrive at Kennedy Sunday, Sept. 26.

During the hurricane, the roof of the building that housed the tank was ripped off by high winds. After falling debris damaged the tank, it was removed from the shuttle flight manifest. Lockheed Martin engineers assessed the damage, and prepared and executed a tank restoration plan.

The Shuttle Propulsion Office at NASA's Marshall Space Flight Center in Huntsville, Ala., manages the External Tank Project. Lockheed Martin Space Systems Co. of Denver is the prime contractor. For more than 29 years of shuttle flights, Lockheed Martin workers at Michoud have built and delivered 135 flight tanks to NASA's [Space Shuttle Program](#).

Standing 15 stories tall and almost 28 feet in diameter, the external tank is the largest element of the shuttle transportation system, which also includes the orbiter, main engines and twin solid rocket boosters. During a shuttle launch, the external tank delivers 535,000 gallons of [liquid hydrogen](#) and liquid oxygen propellants to the shuttle's three main engines. Despite the tank's size, the aluminum skin covering it is only one-eighth-inch thick in most areas. Yet, it withstands more than 6.5 million pounds of thrust during liftoff and ascent. The tank is the only shuttle component that is not reused.

Provided by JPL/NASA

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