

Astronauts inspect space shuttle for launch damage

July 16 2009, By MARCIA DUNN , AP Aerospace Writer



This July 15, 2009 frame grab from NASA TV taken by a camera mounted on the external fuel tank of space shuttle Endeavour shows what appears to debris falling away between the shuttle, top, and the fuel tank, bottom. Two pieces of debris can be seen underneath the NASA emblem, and two pieces to the left of the stanchion on the shuttle. Eight or nine pieces of foam insulation came off the external fuel tank during liftoff, and Endeavour was hit at least two or three times, said Bill Gerstenmaier, NASA's space operations chief. (AP Photo/NASA TV)

(AP) -- Space shuttle Endeavour's astronauts inspected their ship Thursday as engineers on Earth pored over launch pictures that showed debris breaking off the fuel tank and striking the craft.

The slow, tedious work unfolded as the shuttle rocketed toward the

[international space station](#) for a Friday linkup. It was the first full day in orbit for the seven astronauts, who are delivering a veranda for Japan's enormous lab. It also happened to be the 40th anniversary of the launch of the first manned moon landing.

Mission Control told the astronauts late Wednesday that Endeavour's launch damage looked less extensive at first glance than what occurred on the last shuttle flight, but it will take days to sort through available data to reach a conclusion.

Early Thursday afternoon, the [astronauts](#) pulled out a 100-foot laser-tipped boom and began surveying the shuttle's thermal shielding. The procedure has been standard since shuttle flights resumed after the Columbia accident.

Eight or nine pieces of foam insulation came off the [external fuel tank](#) during Wednesday evening's liftoff, and Endeavour was hit at least two or three times, said Bill Gerstenmaier, NASA's space operations chief. Some scuff marks were spotted, but that probably is coating loss and considered minor, he said.

The impacts that occurred less than two minutes into the flight were around the edge of the shuttle where the right wing joins the fuselage.

Any additional damage should be evident when the space station residents use zoom lenses to photograph the entire shuttle as it performs a backflip right before Friday afternoon's docking.

"The bottom line is we saw some stuff," launch manager Mike Moses said Wednesday night. "Some of it doesn't concern us. Some of it you just can't really speculate on right now. But we have the tools in front of us and the processes in front of us to go clear this vehicle for entry" in 16 days.

These tools and processes were put in place after Columbia was destroyed during re-entry in 2003 because of a hole in its wing, left there by flyaway foam at liftoff.

When commander Mark Polansky and his crew catch up with the space station, it will be the first time 13 people are together in space.

Endeavour will remain docked at the space station for nearly two weeks. During that time, the [shuttle](#) astronauts will help install the third and final piece of the Japanese space station lab, a porch for outdoor experiments. Five spacewalks are planned.

On the Net:

NASA:

[http://www.nasa.gov/mission\(underscore\)pages/shuttle/main/index.html](http://www.nasa.gov/mission(underscore)pages/shuttle/main/index.html)

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