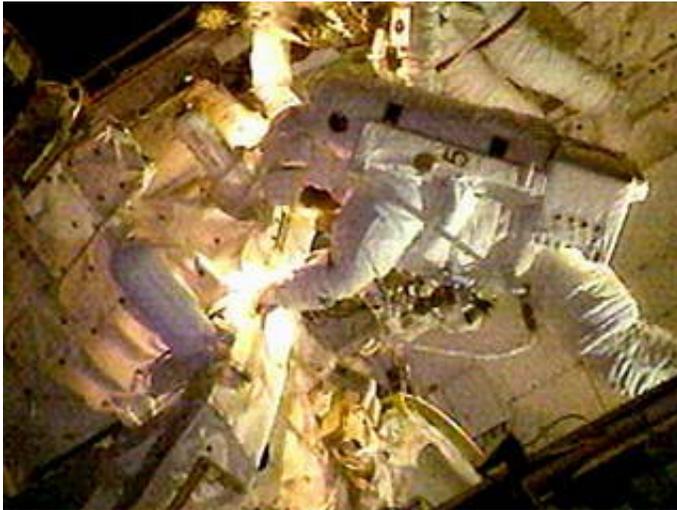


# First in-orbit space shuttle repair successful (Update)

August 3 2005

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Updated: The STS-114 crew completed heat shield repairs efforts on Space Shuttle Discovery's underbelly during today's spacewalk. STS-114 Mission Specialist Steve Robison removed gap fillers that were protruding from two areas between heat-shielding tiles on Discovery. Robison gently tugged the protrusions until they came out. \*\*\*

Space Shuttle heat tile repair efforts are under way. US astronaut Stephen Robison, tethered to the robotic arm of the International Space Station, began to be moved toward the belly of the Discovery shuttle for an unprecedented in-orbit repair mission.

*Image above: Mission Specialist Steve Robinson emerges from Space Shuttle Discovery's airlock hatch to begin the third spacewalk. Credit: NASA TV*

Discovery co-pilot James Kelly began maneuvering the 20-meter (yard) Canadarm 2 around 1220 GMT. Robinson was equipped with a special saw and forceps, as well as a small garbage bag.

In order to make the unprecedented repairs, STS-114 Mission Specialist Steve Robinson is attached to the end of the Station's robotic arm so he can remove gap fillers that are protruding from two areas between heat-shielding tiles on the underbelly of Space Shuttle Discovery. Repair procedures call for Robinson to gently tug the protrusions until they come out. If that does not work, Robinson will have tools to cut off the protrusions.

This is the first time that Shuttle heat shield repairs have been attempted in orbit.

"This is going to be a very delicate task," Robinson said during a news conference Tuesday, "but ... a simple one."

Even though only one spacewalker is able to work on the underside of Discovery, the repair efforts requires teamwork. Fellow spacewalker Mission Specialist Soichi Noguchi is providing communications and visual support to Robinson and flight controllers. Mission Specialist Andy Thomas is choreographing the spacewalk's activities. Pilot Jim Kelly and Mission Specialist Wendy Lawrence are at the controls of the Station's robot arm.

Before they could start the repair work, Noguchi and Robinson attached the External Stowage Platform-2 onto the Station's Unity Node at 5:40 a.m. EDT. The duo also attached a materials exposure experiment to the

Station. Later in the spacewalk, they will remove a Joint Rotary Motor Controller from the Station's truss.

The orbital stroll began at 4:48 a.m. EDT and is slated to conclude about 11:48 a.m. EDT. This is the third STS-114 spacewalk and the 61st spacewalk dedicated Station assembly and maintenance.

Non-spacewalk activities today include an inspection of the repair demonstration tiles inside the Shuttle's payload bay using the Orbiter Boom Sensor System. Also, cargo stowage is continuing inside the Station.

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