

Shuttle Atlantis completes 32nd and final flight (Update 2)

May 26 2010, By MARCIA DUNN , AP Aerospace Writer



A member of the NASA debris team inspects minor damage to the tiles on the space shuttle Atlantis after the orbiter landed on Kennedy Space Center's runway 33 Wednesday, May 26, 2010, in Cape Canaveral, Fla. (AP Photo/Joe Skipper, Pool) (AP Photo/Joe Skipper, Pool)

(AP) -- How would you look after 120 million miles? Atlantis might appear a little scuffed up to outsiders as it heads into retirement after a quarter-century of spaceflight.

But to the trained eyes of NASA engineers, the ship is still in its prime - a fact that adds to wistful emotions at the space agency as the shuttle program winds down.

Atlantis returned home from its 32nd and final voyage Wednesday, the first of three shuttles that are closing out their flying careers and

eventually heading to museums.

"The legacy of Atlantis, now in the history books," Mission Control announced at touchdown.

About 1,200 guests lined the Kennedy Space Center runway to watch the shuttle glide through a clear morning sky to a flawless landing at the end of a 12-day journey.

NASA employees wore white ribbons with the name "Atlantis" and the shuttle's picture embossed in gold. Even the lead flight directors came in from Houston for the occasion.

"That was pretty sweet," Mission Control radioed after Atlantis came to a stop on the runway. "That was a suiting end to an incredible mission."

Only two shuttle flights remain - by Discovery and Endeavour - before the entire fleet is retired. Barring a reprieve from the White House, Atlantis will stand by as a rescue ship for the very last shuttle flight, then take off for a museum somewhere.

The shuttle came back "really, really clean," with just a couple of dings in its thermal shielding, said NASA officials who were out on the runway with Atlantis' beaming crew and shuttle workers.

"It's just a beautiful machine to see out on the runway, and we got to see it up close and personal again today," observed launch director Mike Leinbach. "I'm going to hate to see that go away."

Before the 2003 Columbia disaster, shuttles regularly landed with hundreds of nicks and even gouges. Redesigned fuel tanks took care of that problem.

Launch manager Mike Moses noted how often NASA officials now describe a just-returned shuttle as "one of the cleanest we've ever seen."

"That's actually the truth. Each one is just getting better and better," he said.

The hodgepodge of old and new thermal tiles, combined with the rigors of launch and the heat of re-entry, might make the shuttles appear shabbier than they really are.

Pilot Dominic "Tony" Antonelli said Atlantis looked "just absolutely fabulous" after logging so many miles. "It's a shame," he said, that the shuttle may not fly again.

"She is so ready to get stacked and back out to the launch pad," Antonelli said.

Atlantis - the fourth to fly in NASA's shuttle series - is ending its run after spending a total of 294 days in orbit and circling Earth 4,648 times. It has carried 189 astronauts and visited the International Space Station 11 times. It also flew seven times to Russia's old Mir station and once to the Hubble Space Telescope.

The shuttle added another 4.8 million miles during its just-completed trip to the space station, for a grand total of 120,650,907 miles over its lifetime. The 120 millionth mile was logged shortly after midnight.

Atlantis' six-man crew installed a Russian compartment, six fresh batteries and an extra antenna at the space station.

As a tribute to their ship, the astronauts flew a small U.S. flag that accompanied Atlantis into orbit on its maiden voyage in 1985, as well as a couple of tool bins full of shuttle mementos.

Sir Isaac Newton even got in on the act. British-born astronaut Piers Sellers flew with a wood chip said to be from the tree that dropped an apple nearly 350 years ago and inspired Newton's writings on gravity.

At the space station, the residents managed to catch a glimpse of Atlantis' final re-entry. "Most impressive," astronaut Timothy Creamer said.

Back inside its hangar by midafternoon, Atlantis immediately started getting prepped for a potential rescue mission for what's currently slated to be the final shuttle flight by Endeavour, targeted for November.

The only other flight on the books is a supply run to the space station by Discovery in September.

Both of those missions have cargo issues that could cause delays.

Some at NASA are holding out hope that Atlantis could make one more supply run to the space station next summer - provided no rescue mission is needed for Endeavour's flight.

NASA's space operations chief, Bill Gerstenmaier, said an extra flight boils down to money - an estimated \$200 million a month to keep the shuttle program operating beyond December.

Once the shuttles retire for good, Americans will keep hitching rides to the space station on Russian rockets until U.S. private enterprise is able to take over. That's one of the goals set forth earlier this year by President Barack Obama, who wants astronauts aiming for asteroids and Mars in the next few decades.

As Atlantis' crew admired their spacecraft on the runway for the last time, Leinbach reflected on the program's place in the hearts of shuttle

workers.

"We've been doing this for 30 years, and so there's not just a technical fascination with it," he said. "There's an emotional tie to it."

NASA expects to decide by the end of June or July where Atlantis and Endeavour ultimately will end up. Discovery is bound for the Smithsonian Institution.

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