

Atlantis docks at space station on last mission

Space shuttle Atlantis arrived at the International Space Station on Sunday to deliver a last batch of supplies to the orbiting outpost on the final flight of the U.S. shuttle program.

Commander Chris Ferguson gently eased Atlantis into its parking slip on the station's Harmony node at 11:07 a.m. EDT as the spacecraft soared 230 miles over the Pacific Ocean.

"Welcome to the International Space Station for the last time," station flight engineer Ron Garan radioed to the crew.

Crews opened Atlantis' hatch less than two hours later and the shuttle's 4-member crew floated through the airlock into the recently completed \$100 billion orbital outpost.

After a 30-year history that has cost nearly \$200 billion and claimed the lives of 14 astronauts, the shuttles are being retired to make way for a new generation of spacecraft that President Barack Obama says will put U.S. astronauts on an asteroid and then on to Mars.

The docking capped a two-day journey that began with an emotional send-off from the Kennedy Space Center, where about 1 million spectators gathered on Friday to watch the shuttle thunder into the sky for the program's 135th and final flight.

About an hour before docking, Ferguson gently somersaulted Atlantis so Garan and crew-mates aboard the station could photograph the shuttle's delicate heat-resistant tiles.

"Poetry in motion," said mission commentator Rob Navias as television cameras aboard the station relayed video of the sleek spaceship slowly backflipping over the cloud-speckled northern Atlantic Ocean.

The thousands of pictures will be sent to ground control teams to analyze for signs of damage to Atlantis' heat shield. This safety procedure was added for all shuttle missions to the station following the 2003 Columbia accident.

Seven astronauts died when Columbia broke apart as it attempted to return to Earth with a badly damaged heat shield.

Preliminary assessments showed Atlantis was in good shape after its launch. The only problem that has cropped up so far is a computer unit shutdown early on Sunday. Three other computers were used for the rendezvous and docking and NASA hopes to recover the failed unit later in the day.

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COMMERCIAL SPACE TAXIS

Atlantis carries more than 5 tonnes of food, clothing, spare parts, science equipment and other supplies for the station, a project involving 16 nations that took more than a decade to assemble.

NASA devoted 37 shuttle missions to building and outfitting the outpost. The shuttle's legacy also includes launching and servicing the Hubble Space Telescope and dispatching dozens of planetary probes and Earth-orbiting satellites

Now that the station is complete, the United States is ending its 30-year-old shuttle program to pave the way for new spaceships that can travel to the moon, asteroids and other destinations in deep space.

Cargo runs to the space station are being turned over to businesses -- Space Exploration Technologies and Orbital Sciences Corp. Both firms plan to begin deliveries for NASA next year. The supplies aboard Atlantis will buy time in case the companies encounter delays.

The shuttle's retirement will leave the United States without the means to fly people into space on its own. Instead, NASA will pay Russia to ferry astronauts to the station until U.S. commercial companies are ready to provide that service.

The United States is investing \$269 million in space taxi development work by Boeing Co, Sierra Nevada Corp, Space Exploration Technologies and Blue Origin, a startup owned by Amazon founder Jeff Bezos.

NASA hopes to resume flying its astronauts from the United States by 2015.

"I am very confident that with the president's continued support and the support that I'm anticipating we'll get from Congress, we're going to be able to put Americans on American-built spacecraft produced through American innovation, NASA chief Charlie Bolden told CNN's "State of the Union" program.

Atlantis is flying with a smaller, four-person crew to accommodate the limited seating aboard the Russian Soyuz spacecraft that would fly them home in the event Atlantis was too damaged to make the return trip.

All shuttle missions since the Columbia accident had a second shuttle waiting to mount a rescue mission if needed.

(Additional reporting by Chris Baltimore in Houston, Editing by Pascal Fletcher and Vicki Allen)

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