Columbia space tragedy, 10 years on

January 31 2013, by Jean-Louis Santini

This undated NASA image, obtained August 26, 2003, shows the crew of the US space shuttle Columbia. NASA on Friday will commemorate the loss of the space shuttle Columbia and its seven astronauts a decade ago, a landmark incident that triggered the end of the shuttle mission.

NASA on Friday will commemorate the loss of the space shuttle Columbia and its seven astronauts a decade ago, a landmark incident that

triggered the end of the shuttle mission.

The US space agency's Administrator Charles Bolden will join other senior officials participating in a ceremony at the Arlington National Cemetery just outside Washington that will also honor others killed in space-related incidents.

Three American astronauts died after a fire swept through the Apollo 1 aircraft during a test run in January 1967, and the explosion of the space shuttle Challenger in January 1986 shortly after take-off killed all seven crewmembers aboard.

Columbia, NASA's first space shuttle orbiter to be put into service—in April 1981—disintegrated during re-entry on February 1, 2003, as it was ending its 28th mission. It had been the first space shuttle to travel to Earth's orbit.

A piece of insulating foam from the external fuel tank that had peeled off during the launch 16 days earlier struck one of Columbia's carbon composite wings.

After the deadly incident, president George W. Bush's administration decided to put an end to the shuttle program, allowing the three remaining orbiters to fly only as long as it took to complete the International Space Station—in 2011—and to honor Washington's commitments to its partners.

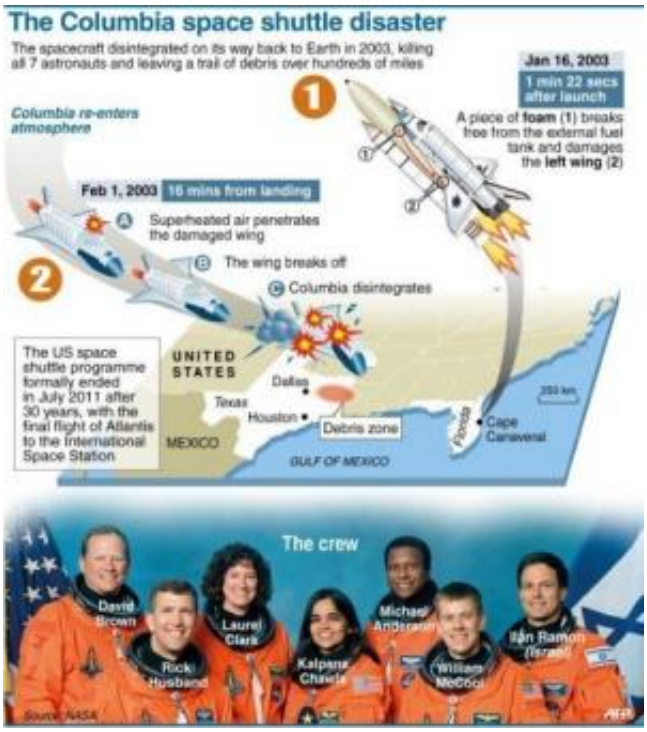
"It was recognized early on that the shuttle was not going to be able to live up to its promises of regular, inexpensive access to space," said John Logsdon, a former director of the Space Policy Institute who was a member of the Columbia Accident Investigation Board.

"It was pretty clear by the mid-80s that it was a first-generation

experimental vehicle even though NASA tried to act like that was not the case."

The end of the shuttle program almost came earlier. In July 2005, during the first orbiter flight since Columbia, the same problem repeated itself, though the piece of foam from the external tank did not pierce a wing.

NASA responded by grounding shuttle flights for nearly a year and the Bush administration nearly called it quits then, Logsdon recalled. But Bush yielded under pressure from international partners.



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"There was a fundamental mistake made back in 1971/72 in trying to develop a vehicle that would carry people and cargo," said Logsdon, suggesting that separating the two would have been a better, less expensive way to proceed.

"It was a failure of political leadership for not replacing the crew-carrying capabilities."

As a result, the United States was confined to low orbit for 30 years.

The Orion spacecraft, currently being built for manned missions to the Moon, asteroids, Mars and the International Space Station, has a safety system that allows the manned part to be separated from the launch vehicle in case of a launch problem. The space shuttles did not have this option.

Since the last space shuttle completed its mission in July 2011, the United States has relied on Russian Soyuz spacecrafts to ferry astronauts to the space station at the price of $60 million a seat while the United States develops alternatives.

In 2010, President Barack Obama launched a program to encourage the private sector to develop systems to carry cargo and later astronauts to the ISS.

SpaceX, one of the chosen firms, has already completed the first two flights of its uninhabited Dragon capsule to carry cargo to the station and return to Earth.

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