

# Three decades of shuttle flight

**[April 4]**  
**Challenger maiden flight**



**[June 18]**  
**Sally Ride is first American woman in space**  
The Soviet Union launched a female cosmonaut into orbit in 1963, but the final frontier was a man's domain for U.S. astronauts until physicist Sally Ride blasted off on Challenger and became the first American woman in space. After Ride's flight, shuttle missions frequently included female crewmembers. Sixteen years later, former Air Force test pilot Eileen Collins became the first woman to command the shuttle.



**[April 12]**  
**Columbia lifts off in first shuttle flight**  
**[1981]**

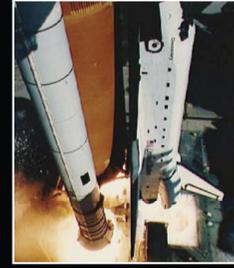
**[Aug. 30]**  
**Guion S. Bluford becomes the first African-American in space**  
**[1983]**



**[Feb. 3]**  
**First orbital mission with untethered spacewalks**



**[Aug. 30]**  
**Discovery maiden flight**  
**[1984]**



**[Jan. 24-27]**  
**Discovery deploys classified DOD satellite**  
The space shuttle played a significant military role in the final years of the Cold War. The fourth overall flight in 1982 carried a classified Department of Defense payload and in early 1985 the shuttle began taking on missions entirely dedicated to national defense. Though details of the first DOD mission remain secret, Discovery reportedly launched a signals intelligence spy satellite. The last of 10 Pentagon missions took place in 1992 after the fall of the Soviet Union, but shuttles would continue to carry nonclassified DOD research projects.

**[Oct. 3]**  
**Atlantis maiden flight**  
**[1985]**



**[Jan. 28]**  
**Challenger explosion kills crew**  
Christa McAuliffe was to become the first schoolteacher in space aboard Challenger. But children who watched the launch and the explosion 73 seconds after liftoff saw tragic proof that space travel remains a perilous calling. The disaster would ultimately ground the program for years while NASA tried to make future shuttle launches safer.



**[June 9]**  
**Rogers Commission report pinpoints cause of disaster**  
The Rogers Commission, appointed by President Ronald Reagan to study the disaster, concluded the physical cause of the accident was a solid rocket booster O-ring that failed to seal properly. The commission also declared the safety culture at NASA was broken.

**[1986]**



**[April 24]**  
**Discovery deploys the Hubble Space Telescope**  
Though limited to low-Earth orbit, the shuttle program opened the door to the far reaches of the universe when Discovery launched the 43-foot long Hubble Space Telescope into orbit. From its vantage high above atmospheric distortions, Hubble sees more clearly than any ground-based telescope. It has shown the birth and death of stars in unprecedented detail, provided a front-row seat for galactic collisions and even given astronomers a faint view of the oldest, farthest objects mankind has ever seen – early galaxies as they appeared in the young universe more than 13 billion years ago.

**[1990]**



**[April 5]**  
**Atlantis deploys Gamma Ray Observatory**



**[June 5]**  
**Astronauts are test subjects in first Spacelab life sciences mission**

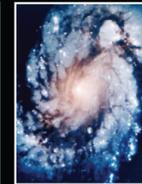
**[1991]**

**[May 7]**  
**Endeavour maiden flight**



**[Dec. 2]**  
**Tenth and final classified DOD mission**

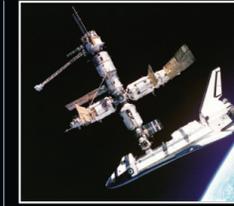
**[1992]**



**[Dec. 2]**  
**Endeavour astronauts fix faulty Hubble telescope optics**



**[1993]**



**[June 27]**  
**Shuttle docks with Mir space station**  
The United States and USSR battled for military dominance and space supremacy. But even at the height of the Cold War, U.S. and Soviet spacecraft docked in orbit as a symbol of détente in the 1975 Apollo-Soyuz Test Project.



After the fall of the USSR, however, a more substantial partnership would develop. In 1995, Atlantis docked with the pioneering Russian space station Mir, a key step in a joint space effort that would help NASA develop expertise for the long-term space missions to come.

**[1995]**

**[Oct. 29]**  
**John Glenn, first American in orbit, returns to space at age 77**

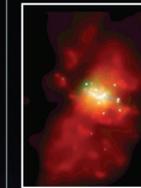


**[Dec. 4]**  
**International Space Station is born**  
Russia launched the unmanned orbiter Zarya in November 1998. In December, the Endeavour crew hooked it to the U.S. module Unity, and the International Space Station was born. For years, shuttle orbiters carried pressurized living and laboratory modules, solar arrays and more to the ever-expanding station. Along with Russia and the U.S., the core participants are Japan, the European Union and Canada. Inhabited for more than a decade, the station today supports research about the effects of living in space. The shuttle delivered the final major components in early 2011.

**[1998]**



**[July 23]**  
**Eileen Collins becomes first female shuttle commander in a mission that deployed the Chandra X-ray Observatory**



**[1999]**

**[Feb. 1]**  
**Columbia breaks up, killing seven crewmembers**  
The second great tragedy of the Space Shuttle program occurred minutes before Columbia's scheduled landing at Kennedy Space Center. During liftoff more than two weeks earlier, a piece of foam insulation had broken off the external shuttle fuel tank and damaged the left wing. As the orbiter came down through the atmosphere, superheated air entered the wing, causing it to fail.



Pieces of the destroyed shuttle streaked across the sky, and debris rained down along a path across Texas and Louisiana. An inquiry revealed managers, not believing foam could cause such damage, ignored requests for damage assessment in orbit. Flights were suspended for more than a year.

**[2003]**



**[Feb. 24]**  
**Discovery carries first humanoid robot**  
On its final launch, Space Shuttle Discovery carried an unconventional crewmember to a permanent berth on the International Space Station. Unlike previous space robots – planetary rovers or deep-space probes, for instance – Robonaut 2, or R2, is a humanoid, with powerful arms, dexterous hands, a torso and a futuristic golden head. The crew will test the NASA-GM robot in a variety of jobs, and the robot might one day fill in for astronauts in tasks that are too dangerous, tiring or dull.



**[July 8]**  
**Atlantis scheduled to launch on final shuttle mission**

**[2011]**

In the excitement of the program's early days, the space shuttle made the final frontier seem much closer as it carried commercial, scientific and national defense payloads into orbit. But mounting operational costs and growing questions about safety following two fatal accidents narrowed the shuttle's mission. In the end, NASA focused on one overriding goal before decommissioning the shuttle: Finish the International Space Station – widely considered humanity's next step into space after the shuttle – without further loss of life.

Expanded interactive timeline at [stripes.com/shuttle](http://stripes.com/shuttle)

**Legend**

- Columbia
- Challenger
- Discovery
- Atlantis
- Endeavour