

## **Space Shuttle Historical Timeline**

### **January 5, 1972: Presidential Direction to Pursue Shuttle**

On January 5, 1972, President Richard M. Nixon announced that NASA would proceed with the development of a reusable low cost space shuttle system. NASA and its aerospace industry contractors continued engineering studies through January and February of 1972. Finally, on March 15, 1972, NASA announced that the shuttle would use two solid propellant rocket motors. The decision was based on study results that showed that the solid rocket system offered lower development cost and lower technical risk.

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[President Nixon's 1972 Announcement on the Space Shuttle](#)

### **September 17, 1976: Enterprise Orbiter Rolled Out**

Enterprise, the first Space Shuttle Orbiter, was rolled out of Palmdale assembly facility on September 17, 1976. The shuttle was constructed without engines or a functional heat shield and was incapable of spaceflight. Rather, the shuttle took part in several atmospheric flight tests that served to validate several aspects of the shuttle program. Starting in February, 1977, Enterprise took part in the nine month long Approach and Landing Test program where it performed manned and unmanned flight tests and was mated atop a 747 shuttle carrier aircraft. Pictured above, the Enterprise detaches from the 747 for the first time while manned.

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[KSC Enterprise Article](#)

[NASA Shuttle Enterprise at Center of Museum's Space Hangar](#)

[NASA Photo of Enterprise with Star Trek Crew](#)

### **April 12, 1981: STS-1 Mission Launches**

STS-1 marked the first orbital flight of the Space Shuttle Program. Shuttle Columbia orbited the Earth 37 times in 54.5 hours, and successfully landed at Edwards Air Force Base.

Learn More

[NASA STS-1 Mission Summary](#)

## [NASA - The First Shuttle Mission and Launch of Columbia](#)

### **February 3, 1984 - STS-41-B: First Untethered Spacewalk**

STS-41-B was the tenth space shuttle mission and the fourth flight of the Challenger. Mission Specialist Bruce McCandless II became the first human Earth-orbiting satellite, venturing out 320 feet (98m) from the orbiter, as depicted. The shuttle landed at Kennedy Space Center's Shuttle Landing Facility nearly 8 days after launch, marking the first time a shuttle landed at its launch site.

Learn More

[NASA STS-41B Mission Summary](#)

### **September 29, 1988 – STS-26: Post-Challenger Return to Flight**

Shuttle Discovery launched on September 29, 1988 on the first Return to Flight mission following the Challenger Accident, which took place on January 28, 1986. The shuttle featured numerous safety improvements, including a redesigned Solid Rocket Booster (SRB) configuration and fixes to the O-ring system that caused the Challenger accident. The orbiter deployed a Tracking and Data Relay Satellite, and conducted 11 scientific and technological experiments.

Learn More

[NASA STS-26 Mission Summary](#)  
[NASA Return to Flight History](#)

### **April 24, 1990 - STS-31: Hubble Space Telescope Launched Into Orbit**

Shuttle Discovery launched on April 24, 1990 on STS-31 to deploy the Hubble Space Telescope. To accomplish this task, Discovery climbed to an altitude of 600 kilometers (370 miles) - the highest shuttle orbit altitude ever at the time. Hubble was successfully placed in orbit on April 25th, with the mission being recorded by two IMAX cameras that were brought on the flight.

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[NASA STS-31 Mission Summary](#)  
[NASA Hubble Website](#)

## **December 2, 1993 - STS-61: First Hubble Servicing Mission**

STS-61 was one of the most complex and challenging manned missions ever attempted. During a record five back-to-back space walks totaling 35 hours and 28 minutes, two teams of astronauts completed the first servicing of the Hubble Space Telescope (HST). Repairing a problem that caused Hubble images to be blurry and unfocused, STS-61 allowed the Hubble to produce sharp and clear images.

Learn More

[NASA STS-61 Mission Summary](#)  
[Images From Refurbished Hubble](#)

## **June 2, 1998 - STS-91: First Flight of the Super Lightweight Tank**

STS-91 was the final shuttle mission to the Mir space station, and featured the first flight of the Super Lightweight Tank. The new super lightweight external tank is the same size as the previous tank design but weighs about 7,500 pounds lighter. The largest single component of the Space Shuttle, the 154-foot-long external tank stands taller than a 15-story building and is as wide as a silo with a diameter of about 27 feet.

Learn More

[NASA STS-91 Mission Summary](#)

## **May 27, 1999 - STS-96: Shuttle Docks With International Space Station for the First Time**

STS-96 marked the first mission where a shuttle docked with the International Space Station. Space Shuttle Discovery brought a variety of supplies and logistics equipment to the station.

Learn More

[NASA STS-96 Mission Summary](#)  
[NASA - The First International Space Station Docking](#)  
[NASA International Space Station Website](#)

## **July 26, 2005 - STS-114: Post-Columbia Return to Flight**

Shuttle Discovery launched on July 26, 2005 on the first Return to Flight mission following the Columbia Accident, which took place February 1, 2003. Its main objective was to test and evaluate new space shuttle safety techniques, and to delivered supplies

and equipment to the International Space Station. The mission featured numerous safety improvements to the Shuttle, including a redesigned External Tank, new sensors and a boom that could be used to inspect the Shuttle for damage. The crew used the new Laser Dynamic Range Imager to scan for problems with the Shuttle's Thermal Protection System. After a 5.8 million mile journey, Discovery touched down at Edwards Air Force Base on August 9.

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[NASA STS-114 Mission Summary](#)

[NASA STS-114 In-depth Coverage](#)

[NASA STS-114 Return to Flight](#)

[NASA Return to Flight: Shuttle in Shipshape I](#)

[NASA Return to Flight: Shuttle in Shipshape II](#)

## **December 9, 2006 - STS-116: Discovery Delivers Permanent Power to the ISS**

In one of the most challenging shuttle missions in NASA's history, Shuttle Discovery successfully delivered permanent power to the International Space Station. The work involved a complicated series of tasks, including the retraction of two solar arrays that had failed to retract previously, and a major rewiring of the station's electrical system. Mission Specialists Robert Curbeam set a NASA record for the most number of spacewalks – four – on a single mission.

Learn More

[NASA STS-116 Mission Summary](#)

[NASA STS-116 In-Depth Mission Coverage](#)

## **Final Shuttle Missions**

2011 marked the final year of spaceflight for the shuttle fleet. Shuttle Atlantis blasted off on July 8 for the last time, on STS-135, where it used the Multi-Purpose Logistics Module to deliver supplies to the International Space Station. Its return to Earth on July 21st marked the end of the Space Shuttle Program.

Shuttle Endeavour launched on May 16 for the last time, on STS-134. It delivered the Alpha Magnetic Spectrometer (AMS) as well as other supplies to the International Space Station.

Shuttle Discovery rocketed into space on February 24 for the last time, on STS-133. Robonaut 2 journeyed to the space station aboard Discovery.

## Learn More

[NASA STS-135 Mission Site](#)

[NASA Multi-Purpose Logistics Modules](#)

[NASA STS-134 Mission Site](#)

[NASA STS-133 Mission Summary](#)

[NASA In-depth Mission Coverage](#)

[NASA Robonaut ISS Page](#)

[NASA Robonaut Program Website](#)