

Female astronauts who changed spaceflight forever

A look at some of the astronauts who blazed a trail for women in space.



Adapted from Sky at Night Magazine

Of the 570 or so people to have launched into space, at the time of writing only 65 have been women. That's roughly 11% representation on the launchpad. No woman has yet walked on the Moon, and women are still underrepresented in many STEM-careers.

Dr. Lovelace argued way back in the 1960s that women could be highly suitable for space, and his 'FLATs' (Fellow Lady Astronaut Trainees) trainee program proved they could compete with – and sometimes outperform – their male counterparts.

Despite many facts proving otherwise, women continued to be viewed as 'unsuitable' for the space program. Those women who did try out for the astronaut training program were subjected to sexist scrutiny and questioning that none of their male colleagues endured. Now women in their dozens may have broken through Earth's atmosphere, but the glass ceiling (limitations based on sexism/gender discrimination) is another matter.

It wasn't until 2013 that a NASA Astronaut Class was equally split between men and women. In 2019 there was outrage when it emerged that the first ever all-female spacewalk had to be canceled when there wasn't a small enough suit on the International Space Station for astronaut Anne McClain. NASA had only prepared large and extra-large suits (the ones designed for male astronauts).

There are signs of progress. NASA Administrator Jim Bridenstine hypothesized in 2019 that space may become a great 'equalizer' of gender representation... but only with the effort of trailblazers who are willing to stand up for equality in Science.

Let's take a look at some of the ground-breakers: some of the extraordinary women astronauts who set their sights on space:

Sally Ride



STS-7 Mission Specialist, NASA astronaut Sally Ride. Credit: NASA

Lagging some way behind the first Russian women in space, the first American woman in space wasn't until June 1983, when 32-year-old Californian physicist Sally Ride (1951–2012) flew aboard NASA's Space Shuttle STS-7, operating the robotic arm used to deploy commercial satellites.

She and five other women were, in 1978, in NASA's first Astronaut Class to accept women. Ride recalled that older men astronauts were unsure how to act around female crew and that NASA engineers had to check whether 100 tampons would be enough for her 1-week flight.

Prior to take-off, she'd endured questions from the press about whether she planned to have children and whether she'd wear make-up in space. On *The Tonight Show*, Johnny Carson made a sexist joke that she'd hold up the shuttle's departure because she'd be "looking for a purse to match her shoes".

She was the only person to serve on the investigative panels for both the Challenger and the Columbia Shuttle disasters. She was also the first LGBTQ+ woman in space. After a second shuttle flight in 1984, Ride left NASA and dedicated much of her energies to increasing women and girls' interest in science, technology, engineering and math.

Mae Jemison



NASA astronaut Mae Jemison onboard Space Shuttle Endeavour in September 1992. Image Credit: NASA

One of the people Sally Ride inspired was [Mae Jemison](#). An accomplished engineer and doctor, Jemison (born 1956) was chosen for NASA's astronaut program in 1987. In 1992 she orbited the Earth on Space Shuttle Endeavour's STS-47 mission for eight days, becoming the first Black woman in space. There she conducted a range of scientific experiments on motion sickness, frog fertility and bone cells.

Jemison was one of a several of female astronauts to cite actress Nichelle Nichols – Star Trek's Lieutenant Uhura – as inspiring her dreams of going into space. Indeed, Jemison went on to appear in an episode of Star Trek in 1993.

Susan Helms



Expedition Two flight engineer Susan Helms pictured in the Destiny Laboratory of the International Space Station, 18 May 2001. Credit: NASA

A highly decorated air force officer, Helms (born 1958) was the first woman from a military background to go into space, women initially being banned from being military test pilots, the most established route to becoming an astronaut.

An assistant professor of aeronautics, Helms was selected by NASA in 1990 and made five spaceflights between 1993 and 2001.

As part of the International Space Station's second expedition crew, from March to August 2001, Helms was the first woman on the ISS and shares the record (with NASA's Jim Voss) for the longest single spacewalk, totaling 8 hours 56 minutes.

Christina Koch



NASA astronaut Christina Koch preparing spacesuits inside the Quest joint airlock on the International Space Station. Credit: NASA

Seven months after astronaut Anne McClain missed her chance because of the blunder of the wrong-sized spacesuit, on 21 October 2019 the historic all-female spacewalk finally went ahead, when engineer Christina Koch (born 1979) and marine biologist and physiologist Jessica Meir (born 1977) upgraded a faulty battery charging unit on the ISS.

Koch went on to break the record for longest continuous time in space by a woman on 28 December 2019 – a total of 328 days in space.