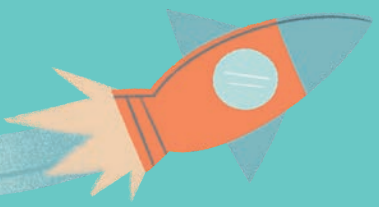
Women

IN SPACE



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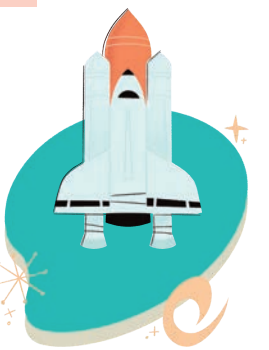


The Mercury 13

Myrtle Cagle, Jerrie Cobb, Janet Dietrich, Marion Dietrich, Wally Funk, Sarah Gorelick (Ratley), Jane "Janey" Briggs Hart, Jean Hixson, Rhea Woltman, Gene Nora Stumbough (Jessen), Irene Leverton, Jerri Sloan (Truhill), and Bernice Steadman.

The Mercury 13 were thirteen American women who took part in a privately funded program aiming to test and screen women for spaceflight. In 1960, William Randolph Lovelace II (who helped develop the tests for NASA's male astronauts) and Air Force Brig. General Don Flickinger invited Geraldyn "Jerrie" Cobb, who was an accomplished aviator, to undergo the same challenges as NASA's Mercury 7 men. Cobb was the first American woman to undergo and pass all three phases of testing. She passed all the training exercises, ranking in the top 2% of all astronaut candidates of both genders. Lovelace and Cobb recruited 19 more women to take the tests. The candidates ranged in age from 23 up to 41 years of age. Jane Hart, the oldest of the group, was a mother of 8 children. Thirteen of the women ended up passing the same physiological screening tests as the Mercury 7 men (some were disqualified due to brain or heart anomalies.)

While Lovelace called the project "Woman in Space Program", the thirteen women later became known as the Mercury 13, as a comparison to the Mercury 7 astronauts. The Mercury 13 women were not part of NASA's official astronaut program, never flew in space as part of a NASA mission, and never met as a whole group.
At 41, In the 1960s some of these women were among those who lobbied the White House and US Congress to have women included in the astronaut program.

In July of 2021, one of the original 13, Wally Funk had the opportunity to ride aboard a Blue Origin flight, entering suborbital space. At age 82, this made her the oldest person to travel into space.

Valentina Tereshkova

Soviet Cosmonaut;
First Woman in Space

Valentina Vladimirovna Tereshkova is a Russian engineer, and former Soviet cosmonaut. She is known for being the first and youngest woman in space, having flown a solo mission on the Vostok 6 on June 16th, 1963. She orbited the Earth 48 times, spent almost three days in space, and remains the only woman to have been on a solo space mission.

Before her selection for the Soviet space program, Tereshkova was a textile factory worker and an amateur skydiver. She joined the Air Force as part of the Cosmonaut Corps and was commissioned as an officer after completing her training. After the dissolution of the first group of female cosmonauts in 1969, Tereshkova remained in the space program as a cosmonaut instructor. She later graduated from the Zhukovsky Air Force Engineering Academy and re-qualified for spaceflight, but never went to space again. She retired from the Air Force in 1997 having attained the rank of major general.

Svetlana Savitskaya & Kathy Sullivan

Cosmonaut & Astronaut; First Female Spacewalkers

In 1984, just months apart, two woman became the first females to walk in space. Svetlana Yevgenyevna Savitskaya was a Russian aviator and Soviet cosmonaut who participated in the selection process for the second group of female cosmonauts, in 1979. On June 30, 1980, she was officially admitted to the cosmonaut group. Of the nine women selected, Savitskaya was the only test pilot. She was chosen above other female cosmonauts due to her extensive flight experience and physical ability to perform necessary operations in a heavy space suit for multiple hours.
On her first flight, Savitskaya became the second woman in space, 19 years after Valentina Tereshkova. On her second flight, she and her fellow cosmonauts docked with the space station Salyut 7, marking the first time a space station had a mixed gender crew. During her second trip, she made history as the first woman to walk in space, and was also the first woman to fly in space a second time.

Former astronaut Kathryn D. Sullivan holds a Ph.D in geology and joined NASA's eighth class of astronauts in 1978, training for spaceflight for six years while awaiting her first assignment. She became the first American woman to perform a spacewalk on October 11th, 1984. Sullivan's spacewalk occurred just months after Savitskaya's excursion. In April of 1990, Sullivan returned to space on the shuttle Discovery to help deploy the Hubble Space Telescope. In 1993, Sullivan left NASA to serve as chief scientist for NOAA and became NOAA's Administrator in 2014.

Sally Ride

Astronaut and physicist;
First American woman in space

Sally Kristen Ride was an American astronaut and physicist. She was a graduate of Stanford University, where she earned degrees in physics and English literature in 1973, a Master's degree in physics in 1975, and a Doctor of Philosophy in physics in 1978. Ride joined NASA in 1978, and in 1983 became the first American woman and the third woman to fly in space, after cosmonauts Valentina Tereshkova in 1963 and Svetlana Savitskaya in 1982.

Ride was the youngest American astronaut to have flown in space, having done so at the age of 32. She was selected as a mission specialist astronaut with NASA Astronaut Group 8, the first class of NASA astronauts to include women. After completing her training in 1979, she served as the ground-based capsule communicator (CapCom) for the second and third Space Shuttle flights, and helped develop the Space Shuttle's robotic arm. In June 1983, she flew in space on the Space Shuttle Challenger, where she operated the robotic arm to deploy and retrieve the first Shuttle pallet satellite (SPAS-1). Her second space flight was the STS-41-G mission in 1984, also on board Challenger. She spent a total of more than 343 hours in space.

Ride served on the committees that investigated the loss of space shuttles Challenger and of Columbia, the only person to participate in both. She is also the first astronaut known to have been LGBTQ.

Mae Jemison

**Astronaut; Doctor;
First African-American woman
to travel into space**

Mae Carol Jemison is an American engineer, physician, and former NASA astronaut. Before joining NASA, she earned her medical degree from Cornell University, was a doctor for the Peace Corps, and worked as a general practitioner. Additionally she obtained degrees in chemical engineering as well as African-American studies.

In pursuit of becoming an astronaut, she applied to NASA. Jemison joined NASA's astronaut corps in 1987 and was selected to serve for the STS-47 mission aboard the Space Shuttle Endeavour in 1992. She became the first African-American woman to travel into space when she served as a mission specialist and orbited the Earth for nearly eight days (just over 190 hours). During the mission she performed experiments in bone cell research, among other tasks. Endeavour carried a Spacelab module in its payload bay to allow room for more than 43 different studies during the mission.

After NASA, Jemison formed a non-profit educational foundation and through the foundation is the principal of the 100 Year Starship project funded by DARPA. She has been inducted into the National Women's Hall of Fame and the International Space Hall of Fame.

Col. Eileen Collins

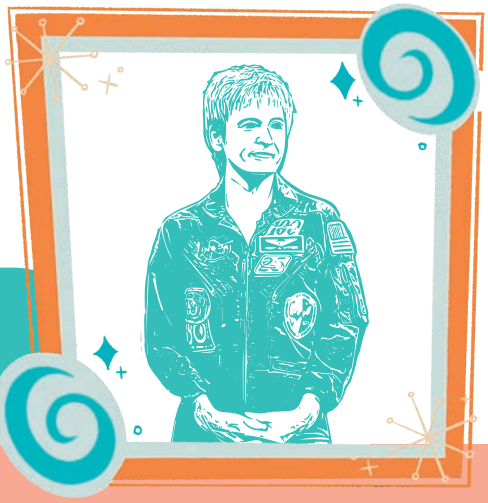
NASA Pioneer; First female Space Shuttle Pilot; First female Mission Commander in NASA history

Col. Eileen Collins became the first female to pilot a U.S. spacecraft with the Discovery shuttle flight in 1995, and the first female commander on the 1999 Columbia shuttle flight. In 2005, NASA tapped Col. Collins to command the space shuttle Discovery's historic "Return to Flight" mission, NASA's first piloted flight following the loss of space shuttle Columbia in 2003.

Her memoir, Through the Glass Ceiling to the Stars, was published in 2021. In 2022, Col. Collins was awarded the National Aeronautic Association's Wright Brothers Award for her inspirational career as an astronaut, teacher and leader.

Col. Collins has left a mark on her community as well. Corning Community College named their observatory after her, and Syracuse Hancock International Airport named their main boulevard after her.

Peggy Whitson



**NASA's first female Chief Astronaut;
First woman to command the ISS;
Record number of days in space**

Peggy Annette Whitson is an American biochemistry researcher, retired NASA astronaut, and former NASA Chief Astronaut. Whitson has a total of 665 days in space, more than any other woman or American.

Her first space mission was in 2002: an extended stay aboard the International Space Station as a member of Expedition 5. On her second mission, Expedition 16, she became the first woman to command the ISS. In 2009, she became the first woman to serve as NASA's Chief Astronaut, the most senior position in the NASA Astronaut Corps. In 2017, Whitson became the first woman to command the International Space Station twice. Her 289-day flight was the longest single space flight by a woman until Christina Koch's 328-day flight.

Whitson holds the records for the oldest woman spacewalker and the most spacewalks by a woman. Whitson's cumulative EVA time is 60 hours, 21 minutes, which places her in fifth place for total EVA time. At age 57 on her final flight, she was the oldest woman ever in space at that time, and remains the oldest to fly in Earth orbit.
On June 15, 2018, Whitson retired from NASA. She later became a consultant for Axiom Space and has been selected to be commander of Axiom Mission 2.

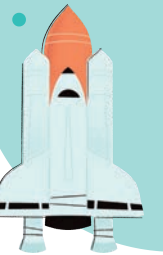
Jessica Meir & Christina Koch

Astronauts; First all-woman spacewalk

On October 18, 2019, Christina Koch and Jessica Meir were the first women to participate in an all-female spacewalk to replace a down power control unit located outside of the International Space Station.

Jessica Ulrika Meir is an American-Swedish NASA astronaut, marine biologist, and physiologist. In September 2002, Meir served as an aquanaut on the NASA Extreme Environment Mission Operations 4 (NEEMO 4) crew. In 2013, she was selected by NASA to Astronaut Group 21. In 2016, Meir participated in ESA CAVES, a training course in which astronauts train in a space-analogue cave environment. Meir launched on September 25, 2019, to the ISS onboard Soyuz MS-15, where she served as a flight Engineer during Expedition 61 and 62.

Christina Hammock Koch is an American engineer and NASA astronaut of the class of 2013. She received Bachelor of Science degrees in electrical engineering and physics and a Master of Science in electrical engineering at North Carolina State University. Just before becoming an astronaut, she served at the National Oceanic and Atmospheric Administration as station chief for American Samoa.
On March 14, 2019, Koch launched to the International Space Station as a Flight Engineer on Expedition 59, 60 and 61. On December 28, 2019, Koch broke the record for longest continuous time in space by a woman. She returned from space on February 6, 2020. Koch will also be the first woman to orbit the moon when she flies on the Artemis mission in 2024 or 2025.



Information Courtesy of

- Wikipedia.com
- Space.com
  - Pioneering women in space: A gallery of astronaut firsts
- Col. Eileen Collins' Press Release

Images

Digital illustrations created by the GirlCratery team, based on photos in the Public Domain

Four women serving together on the International Space Station on April 14, 2010, represented the highest number of women in space simultaneously. Pictured clockwise from the lower left are NASA astronauts Tracy Caldwell Dyson, Expedition 23 flight engineer; NASA astronaut Dorothy Metcalf-Lindenburger, Japan Aerospace Exploration Agency (JAXA) astronaut Naoko Yamazaki and NASA astronaut Stephanie Wilson, all STS-131 mission specialists.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