

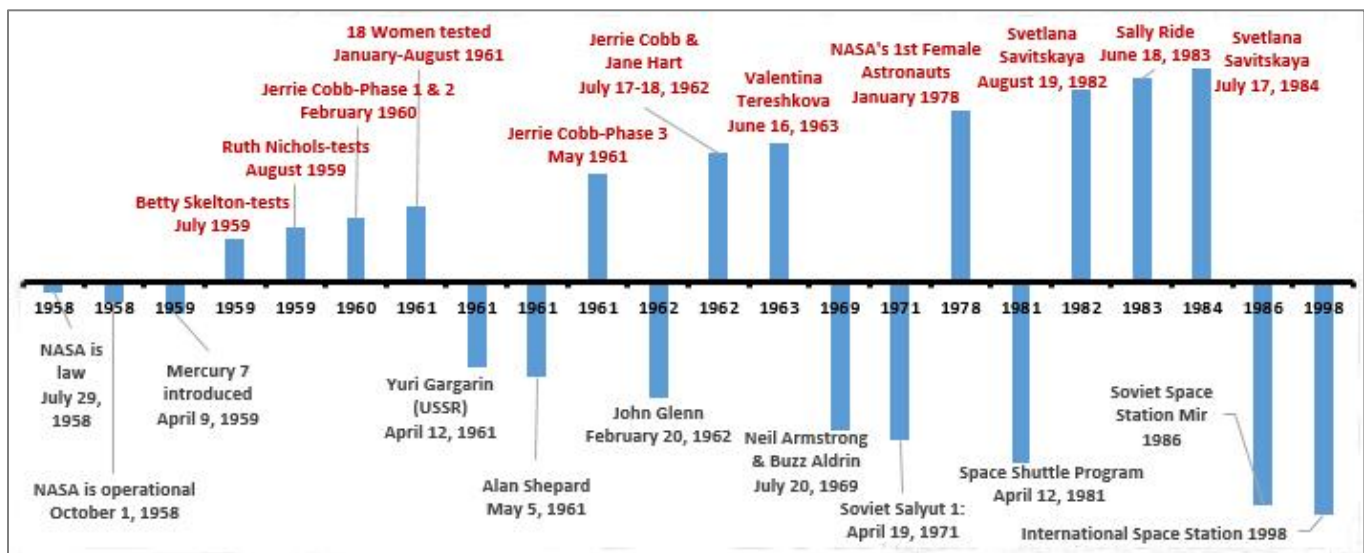
BARRIERS, BREAKTHROUGHS and BRAVERY

Women Pioneers in the Race to Space

Although female astronauts today comprise about 11.5% of all astronauts who have travelled to space, it is hard to imagine the space race without them. Today's female astronauts stand on the shoulders of those who tried, whether successful or not, to break the barriers of a "men's only" profession. While this exhibit will focus chronologically on the women pioneers – aviators, cosmonauts and six astronauts from 1959 to 1984, additional significant events that took place prior, during and after this period will be included for a more relevant perspective of these women and their place in history.

This display exhibit utilizes philatelic material such as stamps, covers, postcards and non-philatelic ephemera along with other noteworthy items of historical significance to tell the story of women pioneers in the race to space.

Timeline of Women (red) to Space Events (black)



1. Introduction and Plan

After the end of World War II a new conflict began between two super powers, the democratic, capitalist United States and the communist Soviet Union. Space exploration became the dramatic arena for the Cold War battle aimed at proving superiority of technology while achieving milestones necessary for national security and political-economic power.

Women in space were not even part of the equation in the early years, at least not in the states. The Soviets beat the U.S. in launching the first artificial satellite in 1957 and then sending the first human in space in 1961. Two years later the first Soviet woman was sent into space, a mission dictated by the state propaganda to be the first in everything in beating the United States in the race to space.

American women wanted to be given the same opportunities to become astronauts as their male counterparts. These are the stories of the women aviators who bravely worked to overcome the barriers set before them and the first six NASA female astronauts, pioneer participants in the new frontier.

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1. **Introduction and Plan**
 2. **1957-58: Early Beginnings**
 - 2.1 Soviet Union's Sputnik 1
 - 2.2 NASA
 3. **1959: First Pioneers**
 - 3.1 Mercury 7
 - 3.2 Betty Skelton
 - 3.3 Ruth Nichols
 4. **1960: Jerrie Cobb**
 5. **1961: A Year of Firsts**
 - 5.1 Mercury 13
 - 5.2 Yuri Gagarin
 - 5.3 Alan Shepard
 6. **1962: The Highs and Lows**
 - 6.1 John Glenn
 - 6.2 Jerrie Cobb & Jane Hart
 - 6.3 Jackie Cochran
 7. **1963: First Woman in Space**
 8. **1969: U.S. Wins Race to the Moon**
 9. **1971: First Space Station**
 10. **1978: NASA's First Female Astronauts**
 - 10.1 Sally K. Ride
 - 10.2 Judith A. Resnik
 - 10.3 Kathryn D. Sullivan
 - 10.4 Anna Lee Fisher
 - 10.5 Margaret Rhea Seddon
 - 10.6 Shannon W. Lucid
 11. **1981: Space Shuttle Program**
 12. **1982: Second Woman in Space**
 13. **1983: First U.S. Female in Space**
 14. **1884: First Female Spacewalk**
 15. **1986: Second Space Station**
 16. **1998: International Space Station**
 17. **Epilogue**

Items of note are highlighted with a red border.

These pioneer women came with a variety of backgrounds. One was a parachutist, some were aviators while others possessed knowledge in science, technology, engineering and math.



Left: Russia - Parachute Landing, 1956, Aug. 5 • Middle: Yugoslavia - Aviatrice, 1950, July 2 • Right: U.S. - Science, Technology, Engineering and Mathematics (STEM) Education, 2018, Apr.6 (Designed by David Plunkert)