



# Heartland Science

Ohio's Legacy of Discovery & Innovation



## Aviation & Aerospace

From the Wright Brothers to the Moon

### America's Astronaut Factory

Ohio has had an important role in populating the United States astronaut corps -- the birthplace of two dozen astronauts, more than any other state.

The National Aeronautics and Space Administration (NASA) selected the first group of astronauts in 1959. From 500 candidates having the required military jet aircraft flight experience and engineering training as well as height below 5 feet 11 inches, 7 military men became the Nation's first astronauts. The second and third groups chosen included civilians who had extensive flying experience. By 1964, requirements had changed, and emphasis was placed on academic qualifications; in 1965, six scientist astronauts were selected from a group of 400 applicants who had a Doctorate or equivalent experience in the natural sciences, medicine, or engineering. NASA is continually involved in promoting educational programs that encourage all students to study science, math, and engineering, and to consider careers in aerospace.



Many Astronauts graduated from Ohio universities including: Baldwin-Wallace College, Case Western Reserve University, Kent State University, Marietta College, The Ohio State University, Muskingum College, Wright State University, and the Air Force Institute of Technology. Astronauts born in Ohio include:

- Neil Armstrong
- Charles Bassett
- Kenneth Cameron
- Donn Eisele
- Michael Foreman
- Michael Gernhardt
- John Glenn
- Michael Good
- Gregory Harbaugh
- Karl Henize
- Terence Henricks
- James Lovell
- G. David Low
- Robert Overmyer
- Judith Resnik
- Ronald Sega
- Donald Thomas
- Carl Walz
- Mary Weber
- Sunita Williams

#### ARMSTRONG, Neil A., Civilian

Born August 5, 1930, in Wapakoneta, Ohio.

Bachelor of Science in aeronautical engineering from Purdue University;

Master of Science in aerospace engineering from the University of Southern California.

Flew on Gemini 8 and Apollo 11.

Cumulative hours of space flight are more than 205.

Cumulative EVA time is more than 2 hours.

- BASSETT**, Charles A., II, Captain, U.S. Air Force  
Born December 30, 1931, in Dayton, Ohio.  
Bachelor of Science in electrical engineering from the Texas Technological College.  
Died February 28, 1966, in St. Louis, Missouri, in the crash of a T-38 jet.
- CAMERON**, Kenneth D., Colonel, U.S. Marine Corps (Retired)  
Born November 29, 1949, in Cleveland, Ohio.  
Bachelor and Master of Science in aeronautics and astronautics from the Massachusetts Institute of Technology.  
Flew on STS-37, STS-56 and STS-74.  
Cumulative hours of space flight are more than 562.
- EISELE**, Donn F., Colonel, U.S. Air Force (Retired)  
Born June 23, 1930, in Columbus, Ohio.  
Bachelor of Science in astronautics from the U.S. Naval Academy; Master of Science in astronautics from the U.S. Air Force Institute of Technology.  
Flew on Apollo 7.  
Cumulative hours of space flight are more than 260.  
Died December 2, 1987, in Tokyo, Japan, of a heart attack.
- FOREMAN**, Michael J., Captain, U.S. Navy Mission Specialist  
Born March 29, 1957, in Columbus, Ohio. Hometown, Wadsworth, Ohio.  
Bachelor of Science in aerospace engineering from the U.S. Naval Academy; Master of Science in aeronautical engineering from the Naval Postgraduate School.
- GERNHARDT**, Michael L., Civilian  
Mission Specialist.  
Born May 4, 1956, in Mansfield, Ohio.  
Bachelor of Science in physics from Vanderbilt University; Master of Science and Doctor of Philosophy in bioengineering from the University of Pennsylvania.  
Flew on STS-69, STS-83, STS-94 and STS-104.  
Cumulative hours of space flight are more than 1,037.  
Cumulative EVA time is more than 22 hours.
- GLENN**, John H., Jr., Colonel, U.S. Marine Corps (Retired)  
Born July 18, 1921, in Cambridge, Ohio.  
Bachelor of Science in engineering from Muskingum College.  
Flew on Mercury 6, and STS-95.  
Cumulative hours of space flight are more than 217.
- GOOD**, Michael T., Lieutenant Colonel, U.S. Air Force  
Mission Specialist.  
Born October 13, 1962, in Parma, Ohio.  
Bachelor and Master of Science in aerospace engineering from the University of Notre Dame.
- HARBAUGH**, Gregory J., Civilian  
Born April 15, 1956, in Cleveland, Ohio. Hometown, Willoughby, Ohio.  
Bachelor of Science in aeronautical and astronautical engineering from Purdue University; Master of Science in physical science from the University of Houston-Clear Lake.  
Flew on STS-39, STS-54, STS-71 and STS-82.  
Cumulative hours of space flight are more than 817.  
Cumulative EVA time is more than 18 hours.

**HENIZE**, Karl G., Civilian

Born October 17, 1926, in Cincinnati, Ohio.

Bachelor of Arts in mathematics from the University of Virginia; Master of Arts in astronomy from the University of Virginia; Doctor of Philosophy in astronomy from the University of Michigan.

Flew on STS 51-F.

Cumulative hours of space flight are more than 190.

Died October 5, 1993, of respiratory and heart failure during a climb of Mount Everest.

**HENRICKS**, Terence T. "Tom", Colonel, U.S. Air Force (Retired)

Born July 5, 1952, in Bryan, Ohio. Hometown, Woodville, Ohio.

Bachelor of Science in civil engineering from the U.S. Air Force Academy;

Master of Arts in public administration from Golden Gate University.

Flew on STS-44, STS-55, STS-70 and STS-78.

Cumulative hours of space flight are more than 1,026.

**LOVELL**, James A., Jr., Captain, U.S. Navy (Retired)

Born March 25, 1928, in Cleveland, Ohio.

Bachelor of Science from the U.S. Naval Academy; Advanced Management Program, Harvard Business School.

Flew on Gemini 7, Gemini 12, Apollo 8, and Apollo 13.

Cumulative hours of space flight are more than 715.

**LOW**, G. David, Civilian

Born February 19, 1956, in Cleveland, Ohio.

Bachelor of Science in physics-engineering from Washington and Lee University, and in mechanical engineering from Cornell University; Master of Science in aeronautics and astronautics from Stanford University.

Flew on STS-32, STS-43 and STS-57.

Cumulative hours of space flight are more than 714.

Cumulative EVA time is more than 5 hours.

**OVERMYER**, Robert F., Colonel, U.S. Marine Corps (Retired)

Born July 14, 1936, in Lorain, Ohio.

Bachelor of Science in physics from Baldwin Wallace College; Master of Science in aeronautics from the U.S. Naval Postgraduate School.

Flew on STS-5 and STS 51-B.

Cumulative hours of space flight are more than 290.

Died March 22, 1996, in the crash of a light aircraft he was testing.

**RESNIK**, Judith A., Civilian

Born April 5, 1949, in Akron, Ohio.

Bachelor of Science in electrical engineering from Carnegie-Mellon University; Doctor of Philosophy in electrical engineering from the University of Maryland.

Flew on STS 41-D.

Cumulative hours of space flight are more than 144.

Died January 28, 1986, in the STS 51-L Challenger accident.

**SEGA**, Ronald M., Civilian Colonel, U.S. Air Force Reserve

Born December 4, 1952, in Cleveland, Ohio. Hometowns, Northfield, Ohio, and Colorado Springs, Colorado.

Bachelor of Science in physics and math from the U.S. Air Force Academy;

Master of Science in physics from Ohio State University; Doctor of Philosophy in electrical engineering from the University of Colorado.

Flew on STS-60 and STS-76.

Cumulative hours of space flight are more than 420.

**THOMAS**, Donald A., Civilian

Mission Specialist.

Born May 6, 1955, in Cleveland, Ohio.

Bachelor of Science in physics from Case Western Reserve University; Master of Science and Doctor of Philosophy in materials science from Cornell University.

Flew on STS-65, STS-70, STS-83 and STS-94.

Cumulative hours of space flight are more than 1,040.

**WALZ**, Carl E., Colonel, U.S. Air Force

Born September 6, 1955, in Cleveland, Ohio.

Bachelor of Science in physics from Kent State University; Master of Science in solid state physics from John Carroll University.

Flew on STS-51, STS-65, STS-79 and STS-108(up)/Exp 4/STS-111(down).

Cumulative hours of space flight are more than 5,532.

Cumulative EVA time is more than 18 hours.

**WEBER**, Mary E., Civilian

Born August 24, 1962, in Cleveland, Ohio. Hometown, Bedford Heights, Ohio.

Bachelor of Science in chemical engineering from Purdue University; Doctor of Philosophy in physical chemistry from the University of California at Berkeley.

Flew on STS-70 and STS-101.

Cumulative hours of space flight are more than 450.

**WILLIAMS**, Sunita L., Lieutenant Commander, U.S. Navy

Mission Specialist.

Born September 19, 1965, in Euclid, Ohio. Hometown, Needham, Massachusetts.

Bachelor of Science in physical science from the U.S. Naval Academy; Master of Science in engineering management from the Florida Institute of Technology.

(Note: STS = Space Shuttle)

### Find out more...

- [NASA Astronaut Fact Book](http://history.nasa.gov/nautfb.pdf)  
(<http://history.nasa.gov/nautfb.pdf>)