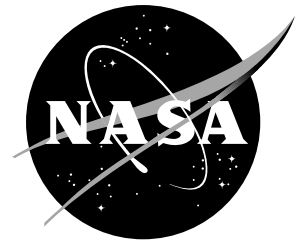


NASA Facts

National Aeronautics and
Space Administration

NASA Headquarters

Public Affairs Office
Code P
300 E Street SW
Washington DC 20546



FS-1995-08-001-HQ

An Overview of NASA

The guiding principles for U.S. exploration of air and space have remained remarkably consistent for 80 years. In 1915, when aviation was still in its infancy, Congress created an organization that would “supervise and direct the scientific study of the problems of flight, with a view to their practical solutions.” That organization, the National Advisory Committee for Aeronautics, evolved into NASA four decades later when Congress formed a civilian agency to lead “the expansion of human knowledge of phenomena in the atmosphere and space.”

The journey begun in 1915 has taken American aviators, astronauts and robotic spacecraft from the dunes of Kitty Hawk to the edge of the atmosphere and to the surface of the Moon. American spacecraft have explored more than 60 worlds in our Solar System, while methodically peering back in space and time to reveal many of the secrets of the Universe.

Benefits

Expanding the realm of human knowledge through a systematic program of exploration and discovery, NASA’s work continues to benefit the nation:

- Virtually every aircraft in use today utilizes technology pioneered by NASA. Aeronautics is one of the nation’s strongest industries, employing almost one million Americans.
- The U.S. aerospace industry generates over \$40 billion in annual exports and almost \$30 billion in positive balance of trade each year.
- New industries have been built on the technology that made space exploration possible, including personal computers, advanced medical equipment, communications satellites, weather forecasting and natural resource mapping.

- NASA’s high-technology research and development provide a return on investment by generating jobs, the demand for goods and services, and new opportunities as advanced technologies spin off into the private sector.

The Agency at a Glance

- NASA employs 21,000 civil servants and generates thousands of high-tech jobs in the private sector.
- The Agency operates 10 Field Centers nationwide.
- The fiscal year 1995 NASA budget is \$14.4 billion.

Recent Scientific and Technical Accomplishments

- Astronauts successfully repaired the Hubble Space Telescope and installed new equipment.
- The Space Station program moved from concept to reality: 25,000 pounds of flight hardware were built, and another 75,000 pounds were to be delivered in 1995.
- NASA-sponsored researchers precisely predicted the impact of Comet Shoemaker-Levy 9 with the planet Jupiter. NASA spacecraft and facilities sponsored an unprecedented campaign to witness and record the event.
- The Hubble Space Telescope provided the first confirmation of the existence of black holes.
- The Universe was determined to be between 8 and 12 billion years old, younger than previously thought.
- Hubble Space Telescope observations ruled out the most conservative explanations for “dark matter,” thought to make up 90% of the mass of the Universe.
- Continental Airlines became the first major air carrier to use a NASA-developed device that warns of dangerous wind-shear conditions.

- Seven Space Shuttle flights in 1994 deployed 1.7 million pounds of cargo to space, during a total flight time of 81 days, and carried 42 astronauts aloft.
- NASA flew the first Russian cosmonaut on a Space Shuttle mission in 1994, paving the way for a series of joint flights between the Shuttle and the Russian Mir Space Station from 1995–1997.
- The Ulysses spacecraft became the first to fly over a polar region of the Sun, and is continuing to map the solar polar regions.
- NASA researchers discovered brilliant flashes of lightning that travel upward from clouds, extending to as high as 60 miles. Some of the flashes reach through the ozone layer to the ionosphere.
- The Galileo spacecraft, on schedule to arrive at Jupiter in 1995, discovered a tiny moon orbiting the asteroid Ida.
- The Magellan spacecraft completed mapping 95% of the planet Venus, discovered evidence of past geologic activity and performed the first aerobraking maneuver, pioneering a technique that will be used in 21st century planetary exploration.
- The Upper Atmosphere Research Satellite, studying the chemistry and physics of ozone depletion, has confirmed that the Antarctic ozone hole that develops each October is caused by human-made chlorine compounds.
- A U.S.-French satellite, TOPEX/Poseidon, is studying ocean circulation and the role it plays in regulating climate change. Data from the satellite are being used to track El Niño, which can bring devastating changes in weather patterns around the world. The satellite data also have shown that global sea levels rose slightly in 1993 and 1994.
- NASA awarded contracts for Lewis and Clark, two of the first of a new breed of small, low-cost satellites that will provide Earth resources data. They cost only about \$60 million each and will go from design to launch in less than half the time of previous spacecraft.
- Data from the Landsat satellites have indicated that deforestation in the Amazon Basin from 1978 to 1988 was less than had been previously believed.
- NASA scientists were able to track the effects of the 1991 eruption of Mount Pinatubo on the atmosphere. Material ejected by the volcano cooled the Earth slightly for approximately two years, and may have contributed to record low global ozone levels observed in 1992 and 1993.
- NASA scientists are using satellite instruments to measure land-surface movements in southern California precisely so that we can better understand what happens during earthquakes.
- The successful rendezvous of the Space Shuttle Atlantis with the Russian Space Station Mir inaugurated a new era of friendship and cooperation that will result in the construction of an international Space Station beginning in November 1997. Astronaut Norm Thagard returned home with the American endurance record for a single spaceflight—more than 100 days in space on this historic 100th human spaceflight. The success of the mission bodes well for the succession of assembly flights that will produce an international Space Station—a permanent laboratory where gravity, temperature and pressure can be manipulated in a variety of scientific and engineering pursuits impossible on Earth.

NASA On-Line Services

NASA provides a variety of on-line services via the Internet. Photographs, scientific and technical information, news releases and organizational data are accessible through a number of outlets, including World Wide Web sites. The following Universal Resource Locator (URL) addresses provide key starting points for exploration of NASA on the “net.”

NASA’s main Web site is:
<http://www.nasa.gov>

The NASA Public Affairs Web site is:
http://www.nasa.gov/hqpao/hqpao_home.html