NASA
National Aeronautics and
Space Administration

Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California

Voyager 2-47
P-21780
July 13, 1979

Voyager 2 acquired this image of Io on July 9, 1979, from a range of 1.2 million kilometers (746,000 miles), as one of a series taken to monitor eruptions over an 8-hour period. On the limb are two color-enhanced, blue volcanic eruption plumes, about 100 kilometers (60 miles) high. These two plumes were first seen by Voyager 1 in March 1979 and have apparently been erupting for a period of at least four months. A total of eight plumes was discovered by Voyager 1, of which the largest plume appeared to be inactive at the time of the Voyager 2 encounter. Voyager 2 viewed seven of the eight plumes seen by Voyager 1, and it is uncertain whether or not one plume is still erupting. One plume seen by Voyager 2 was almost twice as large as when observed by Voyager 1. Approximately 150 images were taken during the 8-hour Io plume watch to detect short-term changes.

The Voyager Project

Two unmanned spacecraft, Voyager 1 and 2, completed highly successful fly-through encounters of the Jovian system on March 5 and July 9, 1979, respectively. The twin spacecraft, now millions of miles beyond Jupiter, are en route to rendezvous with Saturn in November 1980 and August 1981. Voyager 2 may be placed on a trajectory passing Saturn that permits a Uranus encounter in early 1986. Both spacecraft eventually will escape the solar system into interstellar space.

Each spacecraft weighed 820 kg (1,800 lb) at launch and is equipped with eleven scientific instruments that perform a wide range of planetary observations. Voyager 2 was launched from Cape Canaveral, Florida, on August 20, 1977. Voyager 1, flying a shorter, faster trajectory, was launched on September 5, 1977. Communication with each spacecraft is achieved through a worldwide network of deep space tracking stations located in California, Australia, and Spain.

The more significant Jovian findings were the discovery of a ring system encircling Jupiter, erupting volcanos on the Galilean satellite Io, the large differences in appearance and evolution of the surfaces of Jupiter's four planet-size moons, superbolts of lightning and immense auroras in the planet's violently churning atmosphere, and the complex interactions of Jupiter's magnetosphere with the solar wind and Jupiter's satellites.

The Voyager Project was assigned to the Jet Propulsion Laboratory by the National Aeronautics and Space Administration's Office of Space Science as part of NASA's planetary exploration program.