

Results From the Voyager 2 Flyby of Neptune in August of 1989**E. C. Stone and E. D. Miner**

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Introduction. The Voyager 2 encounter with Neptune was the final leg in a twelve-year tour of the four giant outer planets. Designed by the Jet Propulsion Laboratory of the California Institute of Technology under contract with the National Aeronautics and Space Administration, Voyager 2 was launched on August 20, 1977. Following behind its twin, Voyager 1, in its encounters with Jupiter and Saturn, it continued on separately to Uranus and then Neptune, almost 4.5 billion km (2.8 billion miles) from the Sun. At Neptune, eleven scientific investigations (see Table 1) returned a wealth of information about the most remote objects yet visited in the solar system.

The Neptune flyby trajectory (Figure 1) was chosen to permit: (a) a close approach to Neptune's largest moon, Triton, including spacecraft passage behind Triton as viewed from both Sun and Earth; (b) a close polar passage of Neptune, including spacecraft passage behind Neptune as viewed from both Sun and Earth; and (c) timing of closest approach such that the Neptune/Triton shadow passages both occurred at relatively high elevation angles while tracking stations near Canberra, Australia, were viewing the spacecraft.

At closest approach to Neptune (4:02 GMT on August 25, 1989), Voyager 2 was within 4900 km (3040 miles) of the cloud tops in the north polar region. At 9:10 GMT, the spacecraft came within 39,800 km (24,730 miles) of the center of Triton, the