NEAR Shoemaker’s Laser Rangefinder can provide accurate topographic profiles along grooves on the surface of Eros.
Getting into the Groove

NEAR Shoemaker's Laser Rangefinder can provide accurate topographic profiles along grooves on the surface of Eros. The spacecraft obtained this image and profile on June 2, 2000, while in a 31-mile (50-kilometer) orbit. The white line on the image shows the location of the profile, while the graph shows the differences in elevation along the line. The letters “a” through “i” indicate the location of the Laser Rangefinder spot for reference. The groove is relatively shallow except for smaller craters or possible pits within the groove (for example, at “d”). Arrows indicate approximate edges of the groove.

(Image 0135344690)

NEAR Mission

As the first launch in the National Aeronautics and Space Administration’s (NASA) Discovery Program, the Near Earth Asteroid Rendezvous (NEAR) mission is setting the stage for asteroidal exploration and forming a base of knowledge that will be the framework for future asteroid missions. The Johns Hopkins University Applied Physics Laboratory (JHU/APL) designed and built the NEAR Shoemaker spacecraft and manages the mission for NASA. The Mission Team is drawn internationally from universities, government agencies and private industry.

Launched February 17, 1996, NEAR Shoemaker began its orbital mission at asteroid 433 Eros on February 14, 2000. From May through August 2000, the spacecraft traveled in a circular orbit at a radius of 31 miles (50 kilometers) from the center of Eros. It was then boosted to a higher orbit to view Eros from the direction of the sun. In late December 2000, NEAR Shoemaker will descend to a 22-mile (35-kilometer) orbit and operate at that altitude or lower for the remainder of the mission. By February 2001, the NEAR mission will provide the first comprehensive data on the physical geology, composition and geophysics of an asteroid.

For more information visit the NEAR Web site: http://near.jhuapl.edu.

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