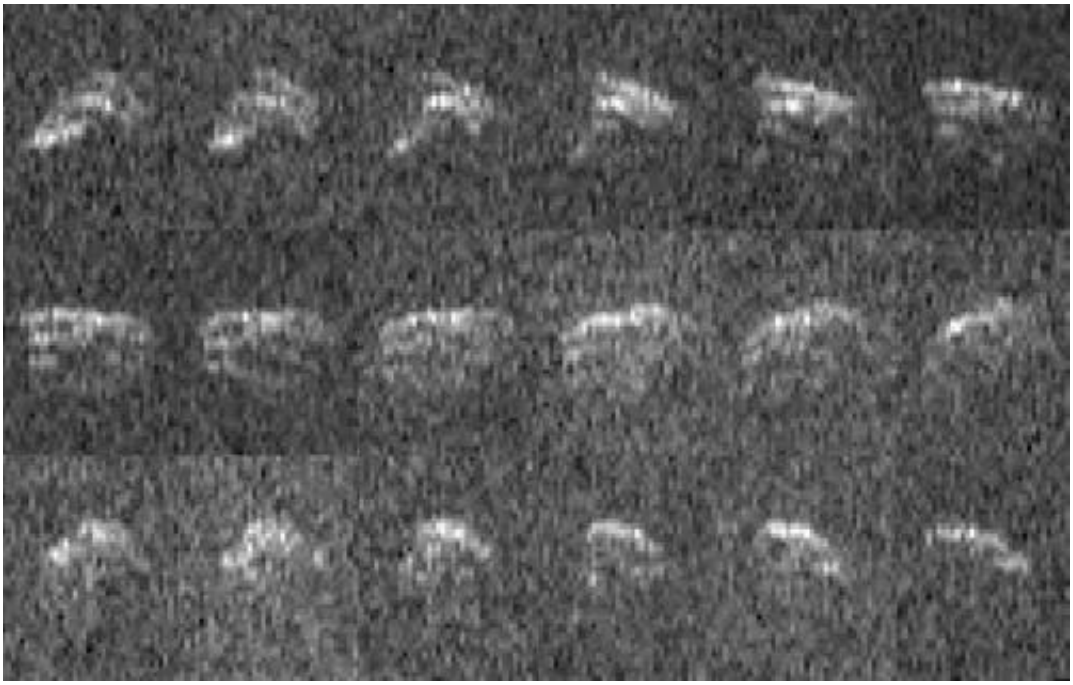
Goldstone radar snags images of asteroid 2013 ET

March 19 2013, by D. Agle



These radar images of asteroid 2013 ET were obtained when the asteroid was about 693,000 miles (1.1 million kilometers / 2.9 lunar distances) from Earth. Credit: NASA/JPL-Caltech/GSSR

(Phys.org) —A sequence of radar images of asteroid 2013 ET was obtained on March 10, 2013, by NASA scientists using the 230-foot (70-meter) Deep Space Network antenna at Goldstone, Calif., when the asteroid was about 693,000 miles (1.1 million kilometers) from Earth, which is 2.9 lunar distances.

The radar imagery suggests the irregularly shaped object is at least 130 feet (40 meters) wide. The 18 radar images were taken over a span of 1.3 hours. During that interval, the asteroid completed only a fraction of one rotation, suggesting that it rotates once every few hours.

The radar observations were led by scientists Marina Brozovic and Lance Benner of NASA's Jet Propulsion Laboratory, Pasadena, Calif.

Radar is a powerful technique for studying an asteroid's size, shape, rotation state, surface features and surface roughness, and for improving the calculation of asteroid orbits. Radar measurements of asteroid distances and velocities often enable computation of asteroid orbits much further into the future than if radar observations weren't available.

NASA detects, tracks and characterizes asteroids and comets passing close to Earth using both ground- and space-based telescopes. The Near-Earth Object Observations Program, commonly called "Spaceguard," discovers these objects, characterizes a subset of them, and plots their orbits to determine if any could be potentially hazardous to our planet.

JPL manages the Near-Earth Object Program Office for NASA's Science Mission Directorate in Washington. JPL is a division of the California Institute of Technology in Pasadena.

Provided by JPL/NASA

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