

Close Flyby of Near-Earth Asteroid 2011 UW158



Arecibo radar image

In July 2015 near-Earth asteroid 2011 UW158 passed within 2.4 million km (1.5 million miles) of the Earth (just over six times the distance to the Moon).

- Approximately 600 meters long and 300 meters wide (about 200 by 100 feet), the asteroid rotates once every 37 minutes, making it one of the fastest rotating asteroids observed to date. The rapid rotation period indicates that this is a solid body, not a “rubble pile” asteroid, which would be too loosely bound to withstand the rotational forces.
- Spectroscopic observations, indicate that this is an S-type asteroid dominated by the rock-forming silicate minerals olivine and pyroxene.
- Astronomers supported by the Near-Earth Objects Program observed the asteroid at NASA's Infrared Telescope Facility (IRTF) in Hawaii and at the Arecibo radio telescope in Puerto Rico.



- The passage of 2011 UW158 was reported in news media, which referred to the asteroid as being “made of platinum” with a value of “\$5 trillion.” However, based on the spectroscopic data, the object is not metallic, and the rapid rotation speed means that even if it were, it would be unlikely to have mining value.



(Reddy et al., in preparation)

