

Radar Imagery of Near-Earth Asteroid (NEA) 2014 HQ₁₂₄

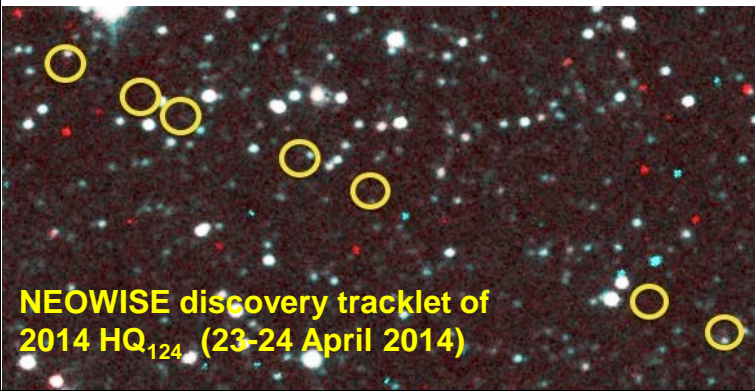
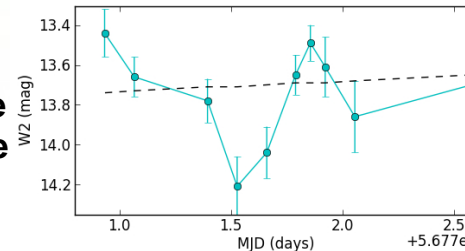


Bistatic Radar observations at the closest approach!

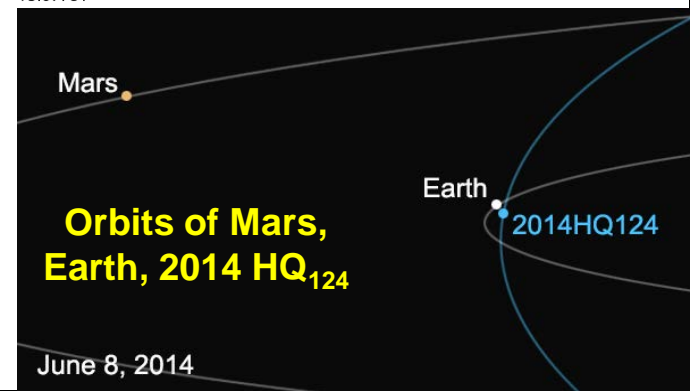
The Goldstone and Arecibo telescopes obtained bistatic radar images, of 2014 HQ₁₂₄ on 8 June 2014, the day of its closest approach to Earth. Working together, with Goldstone emitting and Arecibo receiving, they produced spectacular imagery of this primitive body (left).

Radar measurements indicate this NEA is ~370 meters along its long axis and appears to be a contact binary, where two objects migrate together until they form a single body. Additionally, large boulders appear to be imbedded into the main body.

2014 HQ₁₂₄ rotates approximately once every 20 hours. Lightcurve data from NEOWISE (right) shows the NEA is elongated (with a 0.8 magnitude change in amplitude as the object rotates) and the measured rotation period agrees with the radar data.



Follow up observations and orbit determination showed 2014 HQ₁₂₄ would pass within 3.3 lunar distances (~1.3 million km) of the Earth. Its orbit is shown in blue (right), traveling from the south to the north.



June 8, 2014