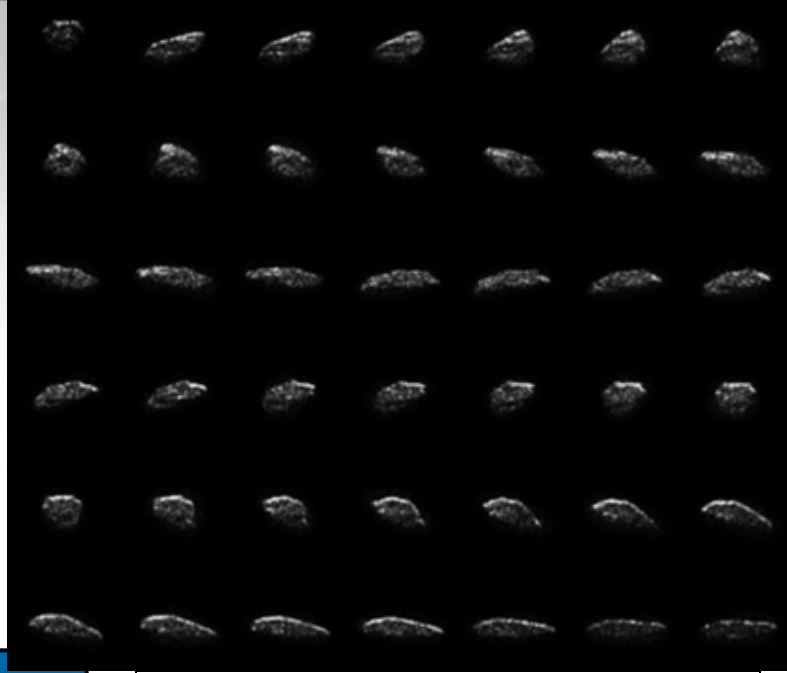


Close Pass of Near-Earth Asteroid 2015 HM10

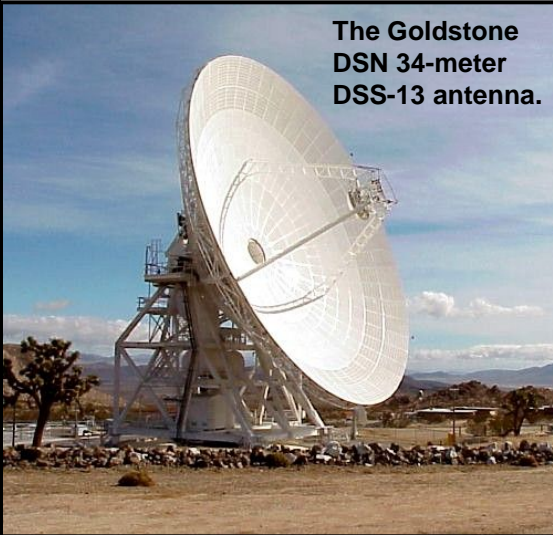
08/14/2015

On July 7, Near-Earth Asteroid 2015 HM10 passed by the Earth at a distance of about 440,000 kilometers (264,000 miles), or close to the maximum Earth-Moon distance.

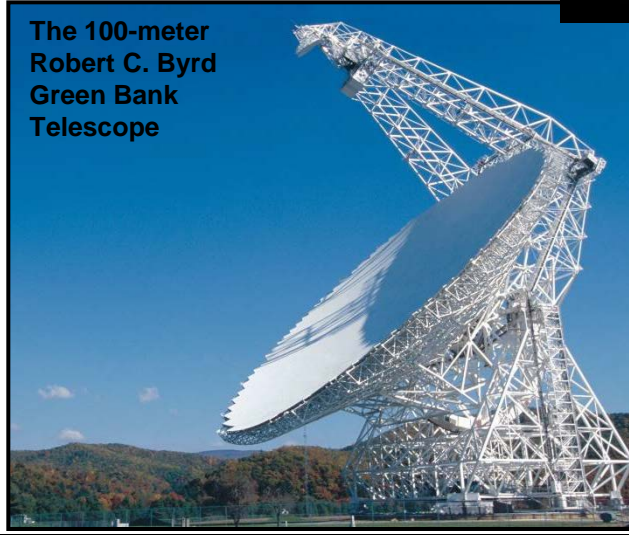
- HM10 was discovered on April 19, 2015, with the Dark Energy Camera on the 4-meter Blanco Telescope at Cerro Tololo in Chile.
- A group of radio astronomy summer-school students used NASA's 34-meter DSS-13 radar transmitter at the DSN in Goldstone, California and NSF's Green Bank Telescope (GBT) in West Virginia to produce 42 images of the asteroid over a span of 29 minutes.
- To make these images, a continuous radar signal was sent from the DSS-13 transmitter at Goldstone to the asteroid. The reflected signal was then received by the 100-meter diameter dish of the GBT in a process known as bistatic radar imaging. This produced images with a resolution of about 3.75 meters per pixel, one of the highest resolutions of an asteroid ever obtained using this radar technique.



The Goldstone DSN 34-meter DSS-13 antenna.



The 100-meter Robert C. Byrd Green Bank Telescope



Collage of radar images of asteroid 2015 HM10 made by the Green Bank Telescope from radar transmitted from NASA's Goldstone Deep Space Network antenna.

- The radar images reveal that 2015 HM10 is elongated and angular with pole-on dimensions of roughly 80 x 40 meters. Multiple linear features and facets are visible along the leading edge and other groups of persistent radar-bright pixels, but no clear evidence for boulders. The radar images confirm a previously published 22 minute rotation period.