Technical Page

This proposal has not been submitted before.

Proposal Type: Urgent
General Category: Planetary Radar
Observation Category: Solar System
Total Time Requested: 13.75 Hours
Minimum Useful Time: 1.0

Proposal Title: Radar Observations of Near-Earth Asteroids 2015 TB145 and 2015 TX24

ABSTRACT:
We request 4 observing tracks totalling 13.75 hours (including transmitter warm-up time) to observe potentially hazardous near-Earth asteroids 2015 TB145 and 2015 TX24. 2015 TB145 will approach Earth on October 31 as close as 1.3 lunar distances, which combined with a size estimate of 320 meters (within a factor of two) will make it one of the strongest radar targets of the year. We request time on October 30, 31, and November 1 to bracket the close approach. Companion observations with Goldstone, Green Bank, and elements of the VLBA are also being scheduled. 2015 TX24 is estimated to be 150 meters in diameter (within a factor of two), which places it in the size region where some asteroids can break the rubble-pile spin limit. This region has not been well sampled with radar. We request one track to refine the size and to estimate the rotation period of this object. For both objects we will collect radar astrometry to improve their orbits.

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<tr>
<th>Name</th>
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<tbody>
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Remote Observing Request

[ ] Observer will travel to AO
[ ] Remote Observing
[ ] In Absentia (instructions to operator)

Instrument Setup

- S-Band radar
- S-band receiver
- X-band
- C-high

Atmospheric Observation Instruments:

Special Equipment or setup: May require C-high or X-band receivers on October 31 for bistatic observations with Goldstone.
RFI Considerations

Frequency Ranges Planned