

Technical Page

Proposal Type: Urgent
 General Category: Planetary Radar
 Observation Category: Solar System
 Total Time Requested: 9 Hours

Proposal Title: Radar Observations of Near-Earth Asteroid 2003 TL4

ABSTRACT:

We propose to obtain high-resolution (15m) imaging of near-Earth asteroid 2003 TL4 in late October of 2003. Recent experience (Nolan et al., 2002, Margot et al., 2002, Giorgini et al., 2002) has shown that there is an enormous variety in the shapes, radar reflectivities, and rotation states of near-Earth asteroids. Good imaging opportunities for moderate-sized objects such as 2003 TL4 (400m diameter) occur only a few times per year. Radar imaging can help determine the internal structure by giving us information about the size, spin rate and even density in the case of binary systems. Most currently known binary systems have primary objects near this size. We have the opportunity to also obtain spectroscopy of this asteroid which will enhance the science return from the radar images by linking the composition to the shape and spin.

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Service Observing Request

Remote Observing Request

- | | | | |
|-------------------------------------|----------------------------|-------------------------------------|-------|
| <input checked="" type="checkbox"/> | None | <input checked="" type="checkbox"/> | No |
| <input type="checkbox"/> | All of the observing run. | <input type="checkbox"/> | Maybe |
| <input type="checkbox"/> | Part of the observing run. | <input type="checkbox"/> | Yes |
| <input type="checkbox"/> | Queue Observing | | |

Instrument Setup

S-Band radar S-band receiver

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

