Technical Page

Proposal Type: Urgent
General Category: Planetary Radar
Observation Category: Solar System
Total Time Requested: 0.5 Hours
Minimum Useful Time: 0.5 hr

Proposal Title: TOO - Interferometric Radar Observations of Asteroid 2006 VV2

ABSTRACT:

Near Earth asteroid 2006 VV2 will approach the Earth to within 0.024 AU in late March-early April 2007 at which time we request a short session to image and do astrometry of this asteroid while it’s illuminated by the Arecibo S-Band radar system. We request 30 min of transmit only time on 2007 April 1. A companion proposal has been submitted for matching time at the VLBA and GBT to receive the asteroid’s radar echo. Synthesis radar imaging can provide plane-of-sky image and position information orders of magnitude better than other ground-based methods, and which is complementary to standard radar mapping. The asteroid’s diameter is likely between 1.5 and 2 km, and we expect a spatial resolution of order 50 m. In addition, by resolving the asteroid’s echo in frequency during correlation, we can determine the absolute orientation of its shape and rotation axis.

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<thead>
<tr>
<th>Name</th>
<th>Institution</th>
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<th>Phone</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

Atmospheric Observation Instruments:

- Special Equipment or setup: none

RFI Considerations
Frequency Ranges Planned

2380