Technical Page

Proposal Type: Urgent
General Category: Planetary Radar
Observation Category: Solar System
Total Time Requested: 12 Hours

Proposal Title: Radar Observations of 2000 EE104 in April 2001

ABSTRACT:

Between April 8–16 2000 we obtained images of newly-discovered near-Earth asteroid 2000 EE104. Another observing opportunity to obtain radar images of this unusual object will occur in April of 2001. The previous images show an elongated shape, with slow rotation period, similar to the "dogbone" shape of Kleopatra. The observed size was about 250m diameter, whereas the predicted size was 1.3 km, which implies a high albedo and perhaps also unusual material properties. The polarization behavior was also quite unusual, with the SC and OC images roughly equal in intensity. This would seem to rule out a metallic composition, which is the simplest explanation of the high visual albedo. The rotation period was about 10 hours, extremely slow for such a small body. However, this improves the imaging S/N ratio. We calculate that the S/N should be about 6 per run, or 30 per day, based on the observations last year. We expect that several days images, combined with last year's data will yield a very interesting shape model, and possibly help determine what this object’s history has been.

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<tr>
<th>Name</th>
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I do NOT want to do remote observing.

Instrument Setup

S-Band radar S-band receiver

Atmospheric Optical Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned