Technical Page

This proposal has not been submitted before.

Proposal Type: Urgent
General Category: Planetary Radar
Sub-Category: Radar
Observation Category: Solar System
Total Time Requested: 3.0 Hours
Minimum Useful Time: 2.0

Proposal Title: Radar observations of near-Earth asteroid 2019 KD3

ABSTRACT:
We request one 3.0-hour observing track (including transmitter warm-up time) to observe the recently discovered near-Earth asteroid (NEA) 2019 KD3 on Saturday-Sunday, July 13-14 (AST), near its closest approach at a distance of 0.041 au. 2019 KD3 is estimated to have a diameter of roughly 80 meters. Newly discovered NEAs are a priority of the NASA-funded planetary radar science group at the Arecibo Observatory, and each year about 40 to 60 newly discovered NEAs are observed using the S-band radar system. Usually not much is known about any recently discovered object, except for its orbital parameters. Radar observations allow us to refine its orbit, preventing the object from being lost in the future due to growing uncertainties. In addition, radar also allows us to estimate its size, rotation state, and surface properties.

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

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

Instrument Setup

- S-Band radar
- S-band receiver

Atmospheric Observation Instruments:
Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

2380