Technical Page

This proposal has not been submitted before.

Proposal Type: Urgent
General Category: Planetary Radar
Observation Category: Solar System
Total Time Requested: 3 Hours
Minimum Useful Time:

Proposal Title: Radar Observations of Recently Discovered Near-Earth Object 2019 NP1

ABSTRACT:

We request one 3-hour observing track (including transmitter warm-up time) to observe the recently discovered near-Earth object 2019 NP1 on July 8th. This target will be within Arecibo’s declination from July 5th to 10th, with a closest approach distance to Earth of 0.017 au on July 7th. This is the first opportunity to observe this asteroid with radar at Arecibo since its discovery. Each year about 40 to 60 newly discovered NEOs are observed using the planetary radar system at AO. Usually not much is known about recently discovered NEOs, except for their orbital parameters. Radar observations allow to refine its orbit, helping us not to lose the object. In addition, radar also allows us to estimate its size, rotation state, and surface properties.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>E-mail</th>
<th>Phone</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anne Virkki</td>
<td>Arecibo Observatory / University of Central Florida</td>
<td><a href="mailto:avirkki@naic.edu">avirkki@naic.edu</a></td>
<td>787 878 2612 ext. 337</td>
<td>no</td>
</tr>
</tbody>
</table>

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