Technical Page

Proposal Type: Regular
General Category: Planetary Radar
Observation Category: Solar System
Total Time Requested: 14 Hours

Proposal Title: Dynamical and Physical Characterization of an object in an Earth Horseshoe Orbit

ABSTRACT:

We request 14 hours of Arecibo Planetary Radar time to elucidate the origin of a 120-m diameter object that follows a horseshoe orbit about Earth. Because the libration period is of order 100 years, radar astrometry is critical to pin down the orbital history of the object over several centuries. The radar-derived shape, spin, and surface properties will help constrain a plausible source region, which may very well be the Earth-Moon system.

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<tr>
<th>Name</th>
<th>Institution</th>
<th>E-mail</th>
<th>Phone</th>
<th>Student</th>
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<tbody>
<tr>
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<td>no</td>
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Service Observing Request

- [X] None
- [ ] All of the observing run.
- [ ] Part of the observing run.
- [ ] Queue Observing

Remote Observing Request

- [ ] No
- [X] Maybe
- [ ] Yes

Instrument Setup

- S-Band radar
- S-band receiver

Atmospheric Observation Instruments:

- Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned