

## Technical Page

Proposal Type: Regular  
 General Category: Planetary Radar  
 Observation Category: Solar System  
 Total Time Requested: 10 Hours

**Proposal Title:** Physical Characterization of Potentially Hazardous Asteroid 2004 DC  
*ABSTRACT:*

We request 10 hours of Arecibo S-band planetary radar time to physically characterize potentially hazardous near-Earth asteroid 2004 DC. This is both the first opportunity to observe this 0.7 - 1.5 km diameter ( $H = 18.1$ ) asteroid with radar and a rare opportunity to observe a large near-Earth asteroid at a signal-to-noise ratio of several thousand per run. Radar observations will refine the orbit of 2004 DC, describe its surface morphology and radar reflection properties, and constrain its size, shape, and spin state. High resolution radar imaging will resolve geologic features several meters in size and determine if 2004 DC has any satellites.

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### Service Observing Request

- None
- All of the observing run.
- Part of the observing run.
- Queue Observing

### Remote Observing Request

- No
- Maybe
- Yes

### Instrument Setup

S-Band radar                      S-band receiver

### Atmospheric Observation Instruments:

**Special Equipment or setup:** none

### RFI Considerations

### Frequency Ranges Planned