

## Technical Page

Proposal Type: Regular  
 General Category: Planetary Radar  
 Observation Category: Solar System  
 Total Time Requested: 18 Hours

**Proposal Title:** Radar Imaging of Two Potentially Hazardous Asteroids

*ABSTRACT:*

We propose to take advantage of particularly strong apparitions of Potentially Hazardous Asteroids 2001 CB21 and 7341 (1991 VK), using radar observations to dramatically improve our knowledge of each object’s physical properties. 2001 CB21 is one of the strongest radar targets visible at Arecibo during the next year. In conjunction with optical data, images with full rotation phase coverage should allow us to construct a shape model with fractional resolution comparable to that achieved with the best radar-derived models of near-Earth objects. 1991 VK is near a 2:5 orbital resonance with the Earth and makes relatively close approaches every five years, making it a candidate for measurement of Yarkovsky acceleration. Radar observations are scheduled at Goldstone for January 10-21, 2007, but Arecibo radar imaging will provide SNRs sufficient for high-resolution shape modeling.

Name	Institution	E-mail	Phone	Student
Michael W Busch	California Institute of Technology	busch@caltech.edu	1-612-269-9998	G

**Service Observing Request**

**Remote Observing Request**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> None<br><input type="checkbox"/> All of the observing run.<br><input type="checkbox"/> Part of the observing run.<br><input type="checkbox"/> Queue Observing | <input checked="" type="checkbox"/> No<br><input type="checkbox"/> Maybe<br><input type="checkbox"/> Yes |
|---|--|

**Instrument Setup**

S-Band radar

**Atmospheric Observation Instruments:**

**Special Equipment or setup:** none

**RFI Considerations**

## Frequency Ranges Planned