Technical Page

Proposal Type:	Regular
General Category:	Planetary Radar
Observation Category:	Solar System
Total Time Requested:	104 Hours
Minimum Useful Time:	

Proposal Title: Radar Imaging of Six Near-Earth Asteroids During April-September 2009

ABSTRACT:

We propose to use the Arecibo S-band radar to carry out Doppler-only spectroscopy and delay-Doppler imaging of six near-Earth asteroids (NEAs) during April-September 2009. Two of these targets, (136617) 1994 CC and 2001 FE90, represent outstanding opportunities with peak signal-to-noise ratios of thousands per transmit/receive cycle. The other four NEAs, 2008 SV11, (163697) 2003 EF54, 2005 CW25, and 2000 CO101, are weaker but still have the potential to yield high-resolution 3-D shape models. Given detection statistics to date, it is likely that at least one target will be a binary or contact binary system. It is also fairly likely that at least one high-polarization-ratio target will be observed, enabling us to test the recent finding that such objects usually belong to the E or V taxonomic classes.

Name	Institution	E-mail	Phone	Student
Christopher Magri	University of Maine at Farmington	magri@maine.edu	207-778-7369	no

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