Technical Page

Proposal Type:	Regular
General Category:	Planetary Radar
Sub-Category:	Radar
Observation Category:	Solar System
Total Time Requested:	62:45 Hours
Minimum Useful Time:	3 days per object

Proposal Title: Radar Imaging of Near-Earth Asteroids (3200) Phaethon, (4954) Eric, (11500) 1989 UR, and 2005 WJ56

ABSTRACT:

We propose delay-Doppler radar imaging, physical modeling, satellite searches, and orbital refinement of near-Earth asteroids (NEAs) 3200 Phaethon, 4954 Eric, 11500 1989 UR, and 2005 WJ56 during October 2007-January 2008. Phaethon and Eric are among the largest objects in the NEA population. Phaethon is the parent body of the Geminids meteors but unlike other meteor parent bodies, it is classified as an asteroid and not as a comet. Searches for cometary activity have been negative, so its origin remains enigmatic. The proposed observations will resolve a controversy concerning its diameter and optical albedo. 1989 UR has a very slow rotation period suggestive of non-principal axis rotation, the origins of which are poorly understood. 2005 WJ56 will be an extremely strong target; radar imaging could places thousands of pixels on its surface and reveal considerable detail.

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Remote Observing Request

- [X] Observer will travel to AO
- [ ] Remote Observing
- [ ] In Absentia (instructions to operator)

Instrument Setup

S-Band radar

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned