Technical Page

Proposal Type:	Regular
General Category:	Planetary Radar
Observation Category:	Solar System
Total Time Requested:	14 Hours
Minimum Useful Time:	2.0 h

Proposal Title: M- and E-class main-belt asteroid radar observations

ABSTRACT:

We continue our long term goal of observing M- and E-class main belt asteroids (MBAs) with the S-band radar system. In this cycle, we propose to observe the last major E-class MBA not yet observed, 64 Angelina, and our 21st M-class asteroid, 69 Hesperia. Our previous observations of E-class asteroids show them to have the highest radar polarization ratio of any asteroid, suggesting an unusual surface texture, composition, or combination of these. Our observations of M-asteroids show that approximately one-third have radar albedos consistent with metallic surfaces and to have significant variations in radar albedo with rotation, a feature not seen in most other MBAs. Our continuing survey of these objects will help us determine their composition and nature.

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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 S-band receiver

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned