Technical Page

Proposal Type:  Regular
General Category:  Planetary Radar
Observation Category:  
Total Time Requested:  41.5 hrs Hours
Minimum Useful Time:  3 hrs

Proposal Title:  Survey of XME asteroids

ABSTRACT:
We propose to continue our campaign of observing X, M, and E-class asteroids using the S-band radar. Our previous observations have doubled the number of observed M-class asteroids and suggest that only one-third are metallic. Our observations of E-class main-belt asteroids are the first. In this cycle, we propose to observe an additional five (5) M-class targets and one (1) E-class target, substantially increasing the total numbers observed. We will address the following: (1) What fraction of M’s are metallic? (2) Do all E-class asteroids have high polarization ratios as suggested by observations to date? (3) Can we use our observations with VISIR spectra to correlate spectra and metallic compositions?

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
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<th>Student</th>
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</thead>
<tbody>
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</tbody>
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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