Proposal Identification No.: R2241 Date Received: 2006-Jun-01_10:36:19

Technical Page

Proposal Type:	Regular
General Category:	Planetary Radar
Sub-Category:	Radar
Observation Category:	Solar System
Total Time Requested:	12 Hours
Minimum Useful Time:	

Proposal Title: High-Resolution Radar Studies of the Moon's Mega-Regolith

ABSTRACT:

The Moon's surface is exposed to constant bombardment by meteorites, and over time these impacts create a mixed layer of pulverized dust and rock fragments called the regolith. In the relatively younger basalt flows that fill ancient basin floors, the regolith is a few meters thick. In older highlands terrain, the regolith is more complex, varying widely in thickness and in block size distribution. These changes across the highlands are linked with proximity to major basin-forming impacts, which redistribute even kilometer-scale blocks over great distances. The highland "mega-regolith" is thus up to several km thick, comprised of small to very large fragments of excavated crust. Our goal is to understand spatial variations across the highlands through radar studies of the physical characteristics of debris from 1-km to 100's-km craters that probe the upper few meters to km of the mega-regolith.

Name	Institution	E-mail	Phone	Student
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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 430 CH receiver 430 CH radar S-band receiver

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned