

Technical Page

Proposal Type: Urgent
 General Category: Planetary Radar
 Observation Category: Solar System
 Total Time Requested: 13 Hours

Proposal Title: Rotationally resolved Radar Observations of 105 Artemis: Correlation with 3-micron Spectroscopy

ABSTRACT:

Asteroid 105 Artemis was found to have two hemispheres with different compositions: one side with hydrated silicates on the surface, one without. Our on-going observations (R1885) suggest that hydrated silicates are correlated with high radar albedo, which is a very valuable remote sensing tool. Companion observations of 105 Artemis to confirm the hydrated silicates with 3-micron spectroscopy at the NASA IRTF has been awarded time March 6-8 2006. We propose here for complementary radar observations to determine if the radar albedo is indeed higher on the hydrated side of this asteroid, which has a 16.8 hour rotation period. Another observing opportunity of this asteroid does not arise until 2010.

Name	Institution	E-mail	Phone	Student
Ellen Howell	Arecibo Observatory	ehowell@naic.edu	787 878-2612 x282	no

Service Observing Request

- None
- All of the observing run.
- Part of the observing run.
- Queue Observing

Remote Observing Request

- No
- Maybe
- Yes

Instrument Setup

S-Band radar S-band receiver

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned