

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Solar System
 Total Time Requested: 17 Hours
 Minimum Useful Time: 2.5 hours

Proposal Title: Observations of Comet Lulin: Spectral OH and S-band Radar

ABSTRACT:

We plan to observe Comet Lulin in February, 2009 to detect OH in the coma, and measure the water distribution and production rate. The comet will be 0.41 AU from the Earth, so we plan to attempt detection with CW radar. We have detected other comets at 0.36 AU, so if this object is large or has a lot of large coma grains, it may be measureable. Our on-going program of observing OH spectral lines in comets has been very successful, and this object would add to our other long-period comet observations. We see a wide variety of behaviors, some of which is not predicted by current theories of collisional quenching and OH inversion models. Additional observations will help to determine which of the effects are model deficiencies and which are simply different outflow behaviors of different comets.

Name	Institution	E-mail	Phone	Student
Ellen Howell	Arecibo Observatory	ehowell@naic.edu	787 87802612 x282	no

Remote Observing Request

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

Instrument Setup

S-Band radar L-wide S-band receiver

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned