

## Technical Page

Proposal Type: Regular  
 General Category: Astronomy  
 Sub-Category: Spectroscopy  
 Observation Category: Galactic  
 Total Time Requested: 45 Hours

**Proposal Title:** The Molecular State of Galactic Translucent Clouds: OH

**ABSTRACT:**

The discovery by Grenier et al. (2005, Science) of a population of Galactic clouds with appreciable dust and HI column density, yet somewhat deficient in the common molecular tracer CO, is a sign of our incomplete understanding of the multiphase ISM. We propose to observe the 18 cm lines of OH to ascertain the physical conditions in a few of these clouds. We will combine these observations with datasets of similar angular resolution (~ 10 times better than Grenier et al.), in an effort to determine the nature of these dark clouds. Comparison of the OH emission to H<sub>2</sub> spectra from the SPEAR mission will provide an excellent probe of the molecular gas in these clouds.

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**Service Observing Request**

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

**Remote Observing Request**

- No
- Maybe
- Yes

**Instrument Setup**

L-wide

**Atmospheric Observation Instruments:**

**Special Equipment or setup:** none

**RFI Considerations**

## Frequency Ranges Planned

1550-1750 MHz

This proposal requires Iridium RFI protection at 1612 MHz between 10pm and 6am EST.