

## Technical Page

Proposal Type: Regular  
 General Category: Astronomy  
 Sub-Category: Spectroscopy  
 Observation Category: Extragalactic  
 Total Time Requested: 40 Hours

**Proposal Title:** A Blind HI Survey of the Leo I Group

**ABSTRACT:**

We have a program to measure the galaxy luminosity function down to dwarf luminosities and surface brightnesses in the nearby Leo I group. Our catalog is optically selected, and through the course of extensive optical and HI spectroscopic follow-up we find a number of unusual objects typically selected against in a photometric survey. We propose to complement this optical survey with a blind HI survey with Arecibo's L narrow receiver and RA/Dec mapping mode. These observations will identify group members down to a sensitive HI mass limit of  $10^7 M_{\text{sun}}$  – independent of any optical biases. Furthermore, we may construct the HI mass function for Leo I, provide HI mass limits for all known and future members of the group, and measure a total mass in gas for the group.

Name	Institution	E-mail	Phone	Student
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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-narrow

**Atmospheric Observation Instruments:**

**Special Equipment or setup:** none

**RFI Considerations**

**Frequency Ranges Planned**

