Technical Page

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

Proposal Title: HI Measurements of Dwarf Galaxies in the Leo I Group

ABSTRACT:

The faint end of the galaxy luminosity function (LF) is not well determined in many low-density environments like the Local Group. In particular, the dwarf population at the lowest surface brightnesses is not well characterized beyond the Local Group in any environment. We have a program underway to measure the R-band LF in the nearby Leo I group down to $M_R \simeq -11$, $\mu_R(0) \simeq 24.5$. We propose to follow-up our optically-selected sample with HI observations to confirm membership for the majority of our sample which is the most challenging to observe optically. In addition to membership information, HI observations will give us the leverage to disentangle gas-rich dwarf irregulars from the elusive, gas-poor dwarf spheroidals in Leo I, with limits down to $M_{HI} = 3 \times 10^6$ Msun at 10 Mpc.

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I might want to do remote observing.

Instrument Setup

L-narrow

Atmospheric Optical Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1370 - 1432