Proposal Identification No.: A2664 Date Received: 2011-Sep-30_18:14:34

Technical Page

Proposal Type:	Regular
General Category:	Astronomy
Sub-Category:	Spectroscopy
Observation Category:	Extragalactic
Total Time Requested:	14 Hours
Minimum Useful Time:	3

Proposal Title: Ultra-compact High Velocity Clouds in the ALFALFA Survey

ABSTRACT:

The ongoing ALFALFA survey has detected a new class of objects - ultra-compact high velocity clouds (UCHVCs). Isolated spatially and kinematically, the UCHVCs may represent gas-rich, starless minihalos. Extensive follow-up effort is necessary to test this hypothesis. Before starting such a campaign it is vital to ensure that all the UCHVCs are true detections and not spurious signals. The UCHVCs are spatially extended and have narrow velocity widths compared to the standard ALFALFA detection, and their reliability is not well understood within the context of the survey. We propose to conduct targeted L-band wide observations of 62 ultra-compact high velocity clouds (UCHVCs) detected in the ALFALFA survey with SN <10 to confirm the detections. In addition, the observations will be taken at higher spectral resolution, allowing us to search for multi-phase cores predicted by models.

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Remote Observing Request

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

Instrument Setup

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1415-1427.5