Proposal Identification No.: A2174 Date Received: 2005 -Oct-03_19:46:57

Technical Page

Proposal Type:	Regular
General Category:	Astronomy
Sub-Category:	Spectroscopy
Observation Category:	Galactic
Total Time Requested:	37.5 Hours

Proposal Title: An HI Survey of the Perseus Molecular Cloud Complex

ABSTRACT:

The Perseus Molecular Cloud Complex is only 250-300 pc distant and is the prototypical region of active, clustered, low-to-intermediate mass star formation. So fundamentally important is Perseus that it is currently the subject of two far-reaching star formation surveys, the Spitzer "Cores to Disks" (C2D) Legacy Survey and the related CO-ordinated Molecular Probe Line Extinction and Thermal Emission (COMPLETE) survey, that will each map the entirety of the complex in a number of complementary ways. We propose that HI emission from the Perseus Complex and its environs be mapped with Arecibo and the ALFA array. Arecibo HI data will leverage effectively the C2D/COMPLETE data and address significantly the formation, evolution, and destruction of molecular clouds, connecting stars to their atomic gas origins.

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Service Observing Request

- [X] None
- [ ] All of the observing run.
- [ ] Part of the observing run.
- [ ] Queue Observing

Remot e Observing Request

- [X] No
- [ ] Maybe
- [ ] Yes

Instrument Setup

ALFA

Atmospheric Observation Instruments:

Special Equipment or setup: No special equipment needed.

RFI Considerations

Frequency Ranges Planned

N/A