

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Galactic
 Total Time Requested: 36.5 Hours
 Minimum Useful Time:

Proposal Title: "Dark" Atomic Gas in the Diffuse Interstellar Medium

ABSTRACT:

Far-infrared and gamma-ray surveys indicate there are significantly more nucleons in the diffuse interstellar medium than are traced by HI and CO emission. This proposal tests one hypothesis for the supposed "dark gas" associated with the far-infrared and gamma rays. Cold HI is optically thick and does not emit as readily in the 21-cm line, but it can be seen in absorption against radio continuum sources. We will observe radio sources near clouds with far-infrared emission measured by Planck to be in excess of the high-resolution HI observations from the Arecibo GALFA HI survey. We will also test another hypothesis that the "dark gas" is molecular by observing OH absorption toward the brightest sources.

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Remote Observing Request

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

Instrument Setup

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1420.4

1665.4

1667.4