

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 8 Hours
 Minimum Useful Time: 2

Proposal Title: LBW Confirmation of “Dark” Sources in ALFALFA: Understanding the Population of (Almost) Dark Galaxies

ABSTRACT:

This proposal seeks to complete the spring sky component of the approved program A3067, confirming the reality of sources without stellar counterparts in the ALFALFA HI survey. Deep HI and optical imaging of some of these “dark” sources has revealed several “(almost) dark” galaxies: rare HI rich sources with optical counterparts below the surface brightness limit of SDSS. These (almost) dark galaxies are extreme outliers from standard star formation laws, and the reasons for their suppressed star formation are unclear. Increasing the sample will require further time consuming follow up imaging of the remaining ALFALFA “dark” detections, however, most of these are in a S/N regime where they are only ~50% reliable, and therefore require confirmation before committing the time for detailed study. Thus, this proposal requests 8 hours to confirm the ~36 remaining ALFALFA “dark” sources in the spring sky, completing the sample of candidate (almost) dark galaxies.

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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

1340-1420

This proposal requires coordination with Punta Salinas radar within the band 1222-1381 MHz..

This proposal requires coordination with GPS L3 at 1381 MHz.