This proposal has not been submitted before.

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

**ABSTRACT:**

Of the ∼25,000 extragalactic sources in the ALFALFA HI survey, only ∼1% do not have likely stellar counterparts. A follow up campaign to observe these “dark” sources has revealed a rare population of “(almost) dark” galaxies: 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. Yet, characterizing more will require time consuming synthesis and optical observations of the remaining “dark” ALFALFA detections. However, most of these unobserved detections 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 42 remaining ALFALFA “dark” sources in the fall sky as an important first step in the search for (almost) dark galaxies.

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<th>Name</th>
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<th>E-mail</th>
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<th>Student</th>
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<tbody>
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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

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.