

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 126.5 Hours
 Minimum Useful Time: 2 hours

Proposal Title: The Arecibo Pisces-Perseus Supercluster Survey (APPSS)

ABSTRACT:

The Pisces-Perseus Supercluster (PPS) is a strong linear overdensity that stretches for more than 50 degrees across the Arecibo sky. This rich filament forms an isolated structure, separated from the local supercluster by a deep void, and from structure behind it by a background void. Here we propose to continue our successful A2982 program targeting likely PPS members, identified as low-mass, gas-rich galaxies by their SDSS and GALEX photometry. Our LBW observations thus far have a 68 percent detection rate, adding 239 additional HI detections to this region of the sky. The second half of the program that we propose here will enable a high signal-to-noise detection of inflow onto this filament through the use of the Baryonic Tully-Fisher Relation, as well as probe the PPS HI population down to $\log \text{MHI} = 8$, an order of magnitude lower than ALFALFA.

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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

1360 - 1430

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

This proposal requires coordination with GPS L3 at 1381 MHz.