

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 Arcicibo Pisces-Perseus Supercluster (APPS) Survey

ABSTRACT:

In visualizations of the large scale structure within 100 Mpc, the Pisces-Perseus Supercluster (PPS) represents a strong overdensity, separated from the local Laniakea supercluster by a deep void. The PPS extends over 50 degrees of the Arcicibo sky at a near-constant distance of 70 Mpc. Here, we propose to extend the results of the ALFALFA survey by conducting LBW HI-line observations of galaxies which are likely, based on photometry derived from SDSS and GALEX, to be PPS members, but which lie below the ALFALFA detection limit. Previous LBW observations under A2811 and A2859 have demonstrated the efficacy of this approach to increase the HI dataset by 50%. In addition to tracing the HI mass function to $\log M_H = 8$, we will use the Tully-Fisher relation to make a robust measurement of infall onto the PPS for comparison with flows predicted by constrained simulations.

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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 MHz

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

This proposal requires coordination with GPS L3 at 1381 MHz.