

Technical Page

This proposal has not been submitted before.

Proposal Type: Large
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 275 Hours
 Minimum Useful Time: 1.5

Proposal Title: The Widefield Arecibo Virgo Extragalactic Survey

ABSTRACT:

The Widefield Arecibo Virgo Extragalactic Survey (WAVES) is a neutral hydrogen (HI) survey using the Arecibo L-band Feed Array (ALFA) that will cover almost the entire Virgo cluster north of 9 degrees to the depth reached by the Arecibo Galaxy Environment Survey (AGES). AGES has covered a field in the Virgo cluster from 7 - 9 degrees north, which serves as a pilot for WAVES. The AGES observations showed that the cluster contains numerous HI sources, including clouds without apparent optical counterparts, that are below the detection threshold of the Arecibo Legacy Fast ALFA (ALFALFA) survey. In the Virgo cluster, WAVES will increase our knowledge of the faint end of the HI mass function, uncover extended structures and dark clouds, and investigate the relationship between HI richness and morphological transformation. It will also cover a volume out to $z = 0.15$ where (as in AGES) further discoveries can be expected.

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Remote Observing Request

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

Instrument Setup

ALFA

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1225 - 1525 MHz (full ALFA range)

1390 - 1432 MHz (Virgo Cluster high resolution)

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

This proposal requires coordination with GPS L3 at 1381 MHz.