

Technical Page

Proposal Type: Large
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 2000 Hours

Proposal Title: The Arecibo Galaxy Environments Survey (AGES)

ABSTRACT:

In this Extragalactic ALFA consortium proposal we are requesting 2000 hours of observing time over a 4 year period. The survey is specifically designed to investigate various galactic environments to higher sensitivity with better spatial, and velocity resolution than previous, fully sampled, 21cm multi-beam surveys. We have chosen specific objects in the nearby Universe upon which to centre our observations, but will also use the full depth of the survey to quantify the HI properties of more distant galaxies. Our science goals include: the HI mass function in different environments, the contribution of neutral gas to the baryonic mass density, the nature of and link between high velocity hydrogen clouds and dwarf galaxies, the identification of gaseous tidal features as signatures of galaxy interactions and mergers, the low column density extent of galaxies, a comparison with atomic hydrogen detected by QSO absorption lines, the identification of isolated neutral gas clouds, the spatial distribution and properties of HI-selected galaxies and comparisons with numerical models of galaxy formation.

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Service Observing Request

- None
- All of the observing run.
- Part of the observing run.
- Queue Observing

Remote Observing Request

- No
- Maybe
- Yes

Instrument Setup

ALFA

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned