

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 32 Hours
 Minimum Useful Time: 5 min

Proposal Title: HI towards Narrow Line Seyfert1 hosts

ABSTRACT:

Narrow Line Seyfert1s (NLSy1s) have been reported in literature as young, evolving AGNs (Active Galactic Nuclei) accreting at super-eddington accretion rate and in some cases have relativistic radio jets and gamma rays. Significant number of these sources have been reported with ionized O[III] outflows. Studying HI gas via 21 cm spectral line towards these sources will provide understanding of kinematics and content of cold neutral gas in the host galaxies which will be further helpful to understand the early stages of host-galaxy AGN co-evolution at low red-shifts. With the Arecibo observations in a sample of 34 NLSy1 sources, we intend to study HI properties (e.g. detection rate, HI mass, velocity width) and its relation with total stellar mass, black hole mass, accretion parameters like Eddington ratio. We also aim to look for effects of AGN feedback in global HI properties of the host galaxies of these sources.

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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

This proposal requires coordination with GPS L3 at 1381 MHz.