

## Technical Page

Proposal Type: Regular  
 General Category: Astronomy  
 Sub-Category: Spectroscopy  
 Observation Category: Extragalactic  
 Total Time Requested: 6.0 Hours  
 Minimum Useful Time: 45 min

**Proposal Title:** 21 cm HI Observations of intermediate-z Clusters of Galaxies

**ABSTRACT:**

We propose to detect and study the global neutral atomic gas properties of a sample of 4 intermediate-redshifts ( $0.15 < z < 0.2$ ) clusters of galaxies with the Arecibo telescope. The data will be compared with the results of our clusters observations with the GBT. We plan to study the neutral gas content in these structures, not only to derive the masses, but to understand the evolution of the clusters space density. As the clusters have been selected using ROSAT and SDSS, we will be able to compare our results with X-ray data. In fact, we will test the correlation between the HI deficiency and the X-ray emitting intra-cluster medium.

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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

1150-1300

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