

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Observation Category: Extragalactic
 Total Time Requested: 24 Hours

Proposal Title: The Spatial Distribution of LSBs in the Pisces-Perseus Supercluster

ABSTRACT:

Low Surface Brightness galaxies (LSBs) appear to be the remnants of the lowest density fragments of the initial density perturbation spectrum of the early Universe (Impey and Bothun 1997). As such, LSBs should be isolated on small scales but otherwise they should trace out the same mass distribution seen in luminous “normal” high surface brightness galaxies. In fact, such traits have been observed for LSBs. However, these results are based on studies of several hundred LSBs scattered over the entire sky. We propose to instead construct a catalog with the spatial positions (and HI content) of roughly 60 LSBs over a smaller field covering the Pisces-Perseus Supercluster. This supercluster is one of the most well-studied nearby superclusters and as such we can leverage previous observations with our new LSB observations to gain a better understanding of the environment in which LSBs reside, which may have significant implications for galaxy evolution in general.

| Name | Institution | E-mail | Phone | Student |
|-----------------|-------------------|------------------------|--------------|---------|
| Juan E Cabanela | Haverford College | jcabanel@haverford.edu | 610-896-1321 | no |

Service Observing Request

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

Remote Observing Request

- No
- Maybe
- Yes

Instrument Setup

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

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

This proposal requires coordination with GPS L3 at 1381 MHz.