

## Technical Page

Proposal Type: Regular  
 General Category: Astronomy  
 Sub-Category: Spectroscopy  
 Observation Category: Extragalactic  
 Total Time Requested: 120 Hours

**Proposal Title:** The Gas Content of Low Surface Brightness Galaxies

**ABSTRACT:**

We propose to observe the 21 cm line in the 289 LSB galaxies that lack HI mass detection. Upgrades to Arecibo improve HI mass detection limits by an order of magnitude over previous surveys, which means we'll be able to test the plausibility of a steepening mass function around  $M_{HI}=10^8 M_{\odot}$ . If plausible, this points towards a large population of LSB dwarfs that could account for all gas content in the nearby universe.

Name	Institution	E-mail	Phone	Student
Valorie Burkholder	Steward Observatory	vburkholder@as.arizona.edu	(520) 621-4934	G

**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-band

**Atmospheric Observation Instruments:**

**Description of Observer Equipment:**

**Special Equipment or setup:** Special setup: Software needs: Media needs:

**RFI Considerations**

**Frequency Ranges Planned**

see proposal