

## Technical Page

This proposal has not been submitted before.

Proposal Type: Regular  
 General Category: Astronomy  
 Sub-Category: Spectroscopy  
 Observation Category: Extragalactic  
 Total Time Requested: 84 Hours  
 Minimum Useful Time: 1hr

**Proposal Title:** Hitting the bullseye: studying the culprit of quenching SF in transitioning galaxies.

*ABSTRACT:*

The Shocked Poststarburst Galaxy Survey (SPOGS) is designed to catch galaxies during the crucial phase of star formation quenching. During this rapid transition, AGN are expected to actively expel a galaxy’s molecular gas causing a move from the blue cloud to the red sequence. Recent observations of local galaxies in this transitional phase have begun to address outstanding questions associated with the quenching process, but as yet the duty cycle of this phenomenon and the range of properties present during the transition phase are poorly constrained. We propose to use the exceptional sensitivity of Arecibo to detect outflows via HI and OH absorption in twelve SPOGS systems. This study is intended to be a pilot study to validate the criteria used to search for molecular outflows during the starburst quenching phase and to begin a systematic search for and study of the impact AGN have on the molecular gas that fuels star formation prior to quenching.

Name	Institution	E-mail	Phone	Student
Katherine Alatalo	California Institute of Technology	kalatalo@ipac.caltech.edu	626-720-4483	no

### 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 Punta Salinas radar within the band 1222-1381 MHz..