

Technical Page

This proposal has been submitted before.

The previous proposal number is A2757.

Proposal Type: Commensal
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Galactic
 Total Time Requested: 0 (commensal observing only) Hours
 Minimum Useful Time: 1h

Proposal Title: SIGGMA: Survey of Ionized Gas in the Galaxy, Made with Arecibo

ABSTRACT:

A key aim of the GALFA consortium is to provide legacy data sets that are more extensive than those achievable by a small group of investigators, and that are rich enough to provide a wide range of science well beyond that envisioned by the proposers. We propose to create the most extensive radio recombination line (RRL) survey ever made. Our Survey of Ionized Gas in the Galaxy, Made with Arecibo (SIGGMA) will fully sample the entire Galactic plane observable from Arecibo Observatory in the set of RRLs that fall in the bandpass of the ALFA receiver. RRLS provide a wide range of critical information on the physical state of ionized interstellar gas that is generally not obtainable through other observational means. We will use these data to identify new HII regions, compute HII region electron temperatures, investigate photodissociation region physics with carbon RRLs, and investigate the origin of the warm ionized medium.

Name	Institution	E-mail	Phone	Student
Loren D Anderson	West Virginia University	loren.anderson@mail.wvu.edu	304-293-4884	no

Remote Observing Request

- Observer will travel to AO
- Remote Observing
- In Absentia (instructions to operator)

Instrument Setup

ALFA

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1225 - 1525

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

This proposal requires coordination with GPS L3 at 1381 MHz.