

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Galactic
 Total Time Requested: 53 hrs Hours
 Minimum Useful Time: 1.25 hrs

Proposal Title: A Cm-wave Molecular Line Census for Three Representative Interstellar Regions
ABSTRACT:

We propose using the new pdev spectrometer(s) to make a 1-10 GHz molecular-line census of three Galactic sources, two (W51 and NGC-2264) representing different stages of star formation, and the third (CRL-618) the envelope of an evolved star. The radial velocity resolution will be <1 km/s. It is anticipated that among the discoveries of this survey will be molecules considered prebiotic and a search for the simplest amino acid, glycine, will also be made. The presence of a multitude of recombination lines will aid interpretation of the data. The use of pdev will not only facilitate the commissioning/shake down of its single-pixel mode, but permit the deepest such line search yet made in the radio.

Name	Institution	E-mail	Phone	Student
Hector G Arce	American Museum of Natural History	harce@amnh.org	212-313-7911	no

Remote Observing Request

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

Instrument Setup

L-wide C S-low X-high S-high C-high

Atmospheric Observation Instruments:

Special Equipment or setup: We will require the pdev(s) spectrometer(s) in single-pixel mode.

RFI Considerations

Frequency Ranges Planned

1 - 10 GHz

This proposal requires Iridium RFI protection at 1612 MHz between 10pm and 6am EST.

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

This proposal requires coordination with GPS L3 at 1381 MHz.