

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category:
 Total Time Requested: 50 Hours
 Minimum Useful Time: 1.5 hr

Proposal Title: The Molecular ISM in High Redshift Objects

ABSTRACT:

Using eight, low-energy K-doublet transitions of Formaldehyde, this proposal aims to study the molecular interstellar medium in nine high-redshift objects. Detections of these multiple transitions (4-5 in each source accessible via the receiver systems at Arecibo) will help determining physical conditions in these galaxies. The derived parameters such as column density, spatial density (or their upper limits) will help constrain chemical models of star formation in early universe.

Name	Institution	E-mail	Phone	Student
Tapasi Ghosh	Arecibo Observatory	tghosh@naic.edu	787 878 2612	no

Remote Observing Request

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

Instrument Setup

430 G L-wide C S-low X-high C-high 705-825

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

410 – 440

700 – 800

1100 – 1750

2000 – 3100

4000 – 6000

6000 – 8000

8000 – 10000

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

This proposal requires coordination with GPS L3 at 1381 MHz.