

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Galactic
 Total Time Requested: 13 Hours

Proposal Title: Confirmation of H₂CO 6 cm Emission toward L1551

ABSTRACT:

Duncan *et al.* (1987) reported the **tentative** detection of thermal formaldehyde $J_{K_a K_c} = 1_{11}-1_{10}$ (H₂CO 6 cm) emission toward L1551. At present only the Orion BN/KL region has been confirmed to show **thermal** H₂CO 6 cm emission. This formaldehyde transition is a very promising probe for spatial densities in star forming regions. The confirmation and characterization of a second H₂CO 6 cm thermal emitter is therefore very valuable. Here we propose to map the L1551 region to confirm the Duncan *et al.* (1987) detection. The Arecibo Telescope is the ideal instrument for this project due to its high angular resolution at C-Band which matches the angular scales of the emitting regions tentatively detected toward L1551.

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Service Observing Request

Remote Observing Request

- | | | | |
|-------------------------------------|----------------------------|-------------------------------------|-------|
| <input checked="" type="checkbox"/> | None | <input checked="" type="checkbox"/> | No |
| <input type="checkbox"/> | All of the observing run. | <input type="checkbox"/> | Maybe |
| <input type="checkbox"/> | Part of the observing run. | <input type="checkbox"/> | Yes |
| <input type="checkbox"/> | Queue Observing | | |

Instrument Setup

C

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

4820-4830 MHz