

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Galactic
 Total Time Requested: 33 Hours
 Minimum Useful Time:

Proposal Title: Dynamic Spectra of the Periodic Pulses Detected from 2 Brown Dwarfs

ABSTRACT:

We propose to conduct observations of 2.75 hours each on 6 successive nights of two brown dwarfs, with a total time request of 33 hours. We request the use of the next generation Mock Spectrometers with the C band and C band high receivers for this observation campaign. These data will enable us to produce dynamic spectra of the pulsed emission covering the frequencies 4-8 GHz. This will enable us to constrain the brightness temperature of the periodic pulses detected from both dwarfs, as well allowing us to investigate evidence of 'inverted-V' structures found present in previous Arecibo observations of the ultracool dwarf TVLM 513-46546. If these observations confirm this phenomenon, it will confirm the ubiquity of the electron cyclotron maser instability as a source of radio emission from stellar and substellar and planetary magnetospheres.

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Remote Observing Request

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

Instrument Setup

C C-high

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned