

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category:
 Total Time Requested: 48 Hours
 Minimum Useful Time:

Proposal Title: The Continuing Search for Radio-Flaring Late T Dwarfs

ABSTRACT:

Despite their low (5-10%) probability of detection, surveys that search for sporadic, flaring radio emission from ultracool dwarfs (spectral types M7 and later) have uncovered a number of objects that have enhanced our understanding of stellar interiors and evolution. The accumulated evidence indicates that the radio luminosities of ultracool dwarfs remain relatively constant across spectral types, suggesting that given enough time, sources cooler than the T6.5 dwarf 2MASS J10475385+2124234, the coolest brown dwarf detected to date, may be uncovered. This proposal seeks to continue to search for such sources, in an attempt to extend our understanding of stellar-like magnetism throughout spectral class T, and possibly Y. Two binary systems will be repeatedly observed, as studies suggest the interaction of the component stellar magnetospheres elevates radio luminosity, thereby potentially aiding detection.

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Remote Observing Request

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

Instrument Setup

C

Atmospheric Observation Instruments:

Special Equipment or setup: Will use Mock Spectrometer.

RFI Considerations

Frequency Ranges Planned

4250 - 5250