

## Technical Page

This proposal has been submitted before.

The previous proposal number is 3024.

Proposal Type: Regular  
 General Category: Astronomy  
 Sub-Category: Spectroscopy  
 Observation Category: Stellar  
 Total Time Requested: 14 Hours  
 Minimum Useful Time: 1.25 hr

**Proposal Title:** The Continuing TY Brown Dwarf Survey

**ABSTRACT:**

Brown dwarfs lie between giant planets and M dwarf stars in terms of mass, but share properties that overlap with both classes of objects. While searches for radio emission from giant exoplanets have been in vain, at the higher end of this mass range, Route and Wolszczan (2012) have reported the revolutionary discovery of a T6.5 radio-flaring brown dwarf with a 900K temperature. This source and another recently detected T dwarf, J1122+25 (Route and Wolszczan 2015), emit radio flares with high brightness temperatures and large circular polarization fractions via the electron cyclotron maser, which occurs in both cool stars and magnetized Solar System planets. This proposal continues the exploration of the TY spectral range initiated in the Spring 2015 proposal, in a quest to learn more about the radio emission, plasma environments, and magnetic properties of progressively cooler, less massive substellar objects that become increasingly similar to giant exoplanets.

Name	Institution	E-mail	Phone	Student
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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:** Mock spectrometer

**RFI Considerations**

**Frequency Ranges Planned**

4250 - 5250