

## Technical Page

This proposal has not been submitted before.

Proposal Type: Regular  
 General Category: Astronomy  
 Observation Category: Galactic  
 Total Time Requested: 8 Hours  
 Minimum Useful Time: 2

**Proposal Title:** Radio Emissions from Red Dwarf Stars with Planets

*ABSTRACT:*

The activity of red dwarf stars, such as Proxima Centauri, are of special interest due to their potential to support habitable planets around them. Planets around these stars could experience tidal locking, strong stellar magnetic fields, strong flares and high UV and X-ray fluxes, all factors that might affect their habitability. Red dwarf stars are also well known emitters of strong radio emissions. Here we propose to observe a nearby red dwarf star with planets to characterize the star and search for correlations between its activity and the presence of planets. We hypothesize that the periodic interaction of close-in planets with the magnetosphere of the star might produce small but detectable effects on its radio emissions. If successful, this approach might be used to detect new planets, including those potentially habitable, around red dwarf stars.

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### Remote Observing Request

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

### Instrument Setup

430 G 327

### Atmospheric Observation Instruments:

**Special Equipment or setup:** none

### RFI Considerations

## Frequency Ranges Planned

300 - 400