

## Technical Page

Proposal Type: Regular  
 General Category: Astronomy  
 Sub-Category: Spectroscopy  
 Observation Category: Galactic  
 Total Time Requested: 32.1 Hours

**Proposal Title:** MAGNETIC FIELDS IN PHOTODISSOCIATION REGIONS FROM ZEE-MAN SPLITTING OF CARBON RECOMBINATION LINES

*ABSTRACT:*

We propose to study the magnetic field strength in photodissociation regions (PDR's) using Zeeman splitting of the C recombination lines. A PDR is the very dense interface between an HII region and its neutral surroundings and is a likely site for self-propagating star formation. C recombination uniquely trace PDR's because the volume densities are large and C is ionized. Other PDR tracers include OH masers and OH/HI absorption lines, but probably neither is unique to PDR's. OH masers often exhibit strong magnetic fields and the absorption lines do not, so the C line observations will resolve this question.

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I might want to do remote observing.

### Instrument Setup

L-wide

### Atmospheric Optical Instruments:

**Special Equipment or setup:** none

### RFI Considerations

### Frequency Ranges Planned