

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Galactic
 Total Time Requested: 145.07 Hours
 Minimum Useful Time: 3 hours

Proposal Title: Continuing Measurements of Magnetized Electron Density Fluctuations in Mira Variable Star Coronae and Surroundings

ABSTRACT:

We are using a new technique for measuring electron density fluctuations in the Sun’s corona and finding many interesting results, including: periodic fluctuations in electron column density; Coronal Mass Ejection (CME) magnetized electron clouds; turbulent spectra; power transfer from circular to linear polarization. The technique uses the propagation effects on a spacecraft downlink carrier. The goal of this proposal is to explore the same propagation effects in the coronae of Mira variable stars, using the OH maser lines on the far side of the star (i.e., the positive-velocity masers) as a surrogate spacecraft signal. This is completely unexplored territory in stars. This proposal continues observations scheduled and completed under programs A2980, A3020, and A3063.

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

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1612-1613

1665-1668

1720-1721