

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Galactic
 Total Time Requested: 16 Hours

Proposal Title: Wideband Dynamic Spectroscopy of Coherent Radio Bursts on Active M Dwarfs
ABSTRACT:

The use of dynamic spectra was crucial in clarifying the physical mechanisms at work in the solar corona. We propose to utilize wideband spectrometers at high time resolution to investigate extreme radio flares from nearby active M dwarf stars. Such observations will provide a monumental breakthrough in understanding the physics of the stellar coronal environment. Our campaign seeks coordinated GBT and Arecibo observations to monitor flare activity in two frequency bands to (1) study the higher frequency extension (at S-band) of bursts characterized at L-band; (2) examine trends in burst properties over this expanded frequency range, and (3) establish or rule out harmonic emission.

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Service Observing Request

- None
- All of the observing run.
- Part of the observing run.
- Queue Observing

Remote Observing Request

- No
- Maybe
- Yes

Instrument Setup

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1350-1730

This proposal requires Iridium RFI protection at 1612 MHz between 10pm and 6am EST.

This proposal requires coordination with Punta Salinas radar within the band 1222-1381 MHz..

This proposal requires coordination with GPS L3 at 1381 MHz.