

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Pulsars
 Observation Category: Galactic
 Total Time Requested: 74 Hours
 Minimum Useful Time: 30

Proposal Title: Characterizing Galactic Scintillations of Fast Radio Bursts using Radio Pulsars
ABSTRACT:

Fast Radio Bursts (FRBs) are bright, transient pulses of unknown astrophysical origin with exciting prospects as extragalactic and cosmological probes. The scintillation properties of FRBs as they travel through structures in the Galactic medium are not understood and can alter the observed brightness of the pulses. We propose to observe three distant pulsars (PSRs J0823+0159, B1541+09, and J2305+3100) outside of the Galactic plane as proxies for FRB pulses traveling through the Galactic disk and halo. We will characterize the lines of sight towards the pulsars to infer both the diffractive and refractive properties of the medium. We request 12 observations per pulsar for a total of 74 hours of observing time spread at various intervals over the course of the semester.

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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

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

This proposal requires coordination with GPS L3 at 1381 MHz.