

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Pulsars
 Observation Category:
 Total Time Requested: 70 Hours
 Minimum Useful Time: 1 hour

Proposal Title: Exploring the Ionized ISM by observing two bright nearby pulsars: B0950+08 and B1133+16

ABSTRACT:

Pulsar scintillation observations are a powerful probe of the ionized interstellar medium. Arecibo observations are state-of-the-art because several key observations are sensitivity-limited. Scintillation arcs, discovered at Arecibo immediately following the upgrade (Stinebring et al. 2001) yield great detail about the intervening scattering medium, but they require excellent S/N to be observable in detail. Building on previous published observations we request 20-epoch, weekly observations of two nearby and extremely bright pulsars in a not-heavily-subscribed part of the sky: B0950+08 and B1133+16. We propose to make 45-min observations of each pulsar at both 327-MHz and 430-MHz to study the scintillation arc development with frequency. When possible, we will make LOFAR single-station observations (frequency 110-190 MHz) simultaneous with the Arecibo observations.

| Name | Institution | E-mail | Phone | Student |
|---------------------|-----------------|----------------------------|--------------|---------|
| Daniel R Stinebring | Oberlin College | dan.stinebring@oberlin.edu | 440-775-8331 | no |

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