

Technical Page

This proposal has been submitted before.

The previous proposal number is P2950.

Proposal Type: Regular
 General Category: Pulsars
 Observation Category:
 Total Time Requested: 34 Hours
 Minimum Useful Time: 45

Proposal Title: Spectral Indices of Millisecond Pulsars

ABSTRACT:

Although millisecond pulsars (MSPs) are extremely important for several experiments, the spectra of these pulsars have not been measured often. Particularly, the lack of accurate spectral index measurements for a majority of the known MSPs leads to a large uncertainty in the estimation of survey yields. We propose to measure the spectral indices of 33 MSPs for which spectral index measurements are currently not available. In combination with an ongoing, complementary proposal at Effelseberg and using data from the EPTA and NANOGrav archives, we propose to measure the spectral indices of 62 MSPs in all, more than 40% of the known galactic population. Apart from the primary goal of measuring spectral indices, these observations will also be useful for determining the best observing frequencies for pulsar timing experiments, probing the inter-stellar medium and understanding the fundamental similarities and differences between young pulsars and MSPs.

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Remote Observing Request

- Observer will travel to AO
- Remote Observing
- In Absentia (instructions to operator)

Instrument Setup

L-wide S-low 327

Atmospheric Observation Instruments:

Special Equipment or setup: We propose to use the 327, S-low and L-wide receivers. All receivers are necessary. The exact schedule will depend on the allocated time.

RFI Considerations

Frequency Ranges Planned

312 - 342

1150 - 1730

1800 - 3100

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.