Proposal Identification No.: P3029 Date Received: 2015-Sep-01_12:28:00

Technical Page

This proposal has not been submitted before.

Proposal Type:	Regular
General Category:	Pulsars
Observation Category:	Galactic
Total Time Requested:	24 Hours
Minimum Useful Time:	3 hours

Proposal Title: Detailed Study of Single Pulse Modulations in Pulsars

ABSTRACT:

Several pulsars exhibit intriguing subpulse modulation properties — distinct modes of drifting subpulses, bi-directional drifting, interesting combinations of pseudo-nulls, drift reversals, etc. Although there have been numerous single pulse studies, many important aspects are yet to be understood and several pulsars exhibiting interesting subpulse modulations are still waiting to be explored further. A systematic single pulse study of a carefully chosen sample of pulsars, over reasonably long-durations, has a great potential to provide a better understanding of the intriguing single pulse phenomena as well as to critically assess several physical models proposed to explain these phenomena. With this motivation, a systematic single pulse study of several pulsars is embarked upon. As a part of this systematic study, 24 hours of the telescope time is requested to conduct full-polarimetric observation of 4 carefully chosen pulsars at 430 MHz and L-band, using the Arecibo telescope.

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Remote Observing Request

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

Instrument Setup

430 G L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

422 - 442 MHz
1.15 - 1.73 GHz

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.