Technical Page

This proposal has not been submitted before.

Proposal Type:	Regular
General Category:	Pulsars
Observation Category:	
Total Time Requested:	14 Hours
Minimum Useful Time:	2 hours

Proposal Title: Search for giant pulses and mode switching in millisecond pulsars

ABSTRACT:

In previous 327 MHz Arecibo observations of PSR B1957+20, we detected giant pulses, mode switching, and correlations between them. This discovery can place observational constraints on possible emission mechanisms of regular radio emission and giant pulses. Additionally, mode switching in millisecond pulsars (MSPs) has consequences for pulsar timing, and accounting for it can improve time-of-arrival measurements by as much as 0.5 microseconds in PSR B1957+20. We propose a follow-up search for these phenomena on 7 other MSPs (4 of which are pulsar timing array sources) that have comparable or higher flux than PSR B1957+20, requesting 2 hours on each source for a total of 14 hours.

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Remote Observing Request

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

Instrument Setup

327

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

302 - 352