

Technical Page

Proposal Type: Long-term
 General Category: Pulsars
 Sub-Category: Continuum
 Observation Category: Galactic
 Total Time Requested: 200 Hours

Proposal Title: A Search for Bursting Pulsars

ABSTRACT:

We propose to search for a possible new type of "bursting", sporadically emitting pulsars at 430 MHz with the WAPP and the PSPM pulsar backends. The unusual emission properties of this object, which include low duty cycle of emission and a quasi-regular occurrence of 40-60 s, exponentially decaying bursts of pulses separated by 400-600 period nulls are entirely untypical among normal and nulling pulsars and may offer new insights into the physics of pulsar radiation. We initially propose to cover a 50 square degree area of the Galactic plane around $l=55$ degrees. To optimize sensitivity, the search will involve 300-s integrations per sky position. Our survey will also be sensitive to very faint, nearby millisecond pulsars and the objects with unusually long periods.

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I want to do remote observing.

Instrument Setup

430 G 430 CH receiver

Atmospheric Optical Instruments:

Special Equipment or setup: The WAPP and the PSPM pulsar backends.

RFI Considerations

Frequency Ranges Planned

This proposal requires coordination with AFTWF within the band 425-435 MHz.