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Technical Page

Proposal Type:	Regular
General Category:	Pulsars
Observation Category:	
Total Time Requested:	48 Hours

Proposal Title: Timing of Three Recently Discovered Pulsars

ABSTRACT:

We request monthly timing observations of three pulsars recently discovered in Arecibo searches. The first two of these pulsars, J1740+1000 and J1849+2423, were discovered in AO upgrade driftscan searches, while the third, J1907+0918, was discovered in a search for radio pulsations from SGR 1900+14. PSR J1740+1000 is a young, high-velocity pulsar. Using Arecibo timing and eventual VLBA, we aim to calculate both an accurate velocity and distance to this pulsar, placing important constraints on the high-velocity tail of the pulsar velocity distribution. This is important for models of core collapse processes in supernovae and for a complete census of pulsar population. PSRJ̃1907+0918 is a very young pulsar with a possible associated supernova remnant. Timing observations will allow us to calculate a proper motion and determine whether this pulsar, and not SGR 1900+14, is associated with the remnant. If so, this has important implications for evolutionary scenarios of SGRs.

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I NA want to do remote observing.

Instrument Setup

L-wide

Atmospheric Optical Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned