

Technical Page

Proposal Type: Regular
 General Category: Pulsars
 Sub-Category: Continuum
 Observation Category: Galactic
 Total Time Requested: 90 Hours

Proposal Title: TIMING OBSERVATIONS OF 14 MILLISECOND PULSARS

ABSTRACT:

Our team has conducted a deep survey for pulsars at L-Band towards all 22 globular clusters visible from Arecibo within 50 kpc of the Sun. This was done using the Wideband Arecibo Pulsar Processor and time awarded in Arecibo projects P1436 and P1636. We have discovered a total of 12 new MSPs (11 of which are in binary systems, and at least 2 of which are eclipsing) in 5 globular clusters (M3, M5, M13, M71, and NGC6749), with 90% of our data searched. We have been timing these discoveries at Arecibo with time awarded in projects P1640, P1690, P1771, and P1739 and have derived precise phase-connected solutions for many of these new systems, although our newest discoveries do not yet have timing solutions. Here we propose to continue timing all these sources (as well as 2 previously discovered pulsars in M13) on a monthly basis over the course of the next year, using multiple WAPP backends.

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Service Observing Request

- None
- All of the observing run.
- Part of the observing run.
- Queue Observing

Remote Observing Request

- No
- Maybe
- Yes

Instrument Setup

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: No special equipment is needed.

RFI Considerations

Frequency Ranges Planned

1120-1600

This proposal requires coordination with Punta Salinas radar within the band 1222-1381 MHz..

This proposal requires coordination with GPS L3 at 1381 MHz.