

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Pulsars
 Observation Category: Galactic
 Total Time Requested: 49.5 Hours
 Minimum Useful Time: 2h45m

Proposal Title: Timing the binary millisecond pulsars in M5 and M13.

ABSTRACT:

Past observations with the Wideband Arecibo Pulsar Processor (WAPP) of globular clusters M5 and M13 have detected a number of rapidly spinning faint pulsars. Many of these pulsars are in binary systems, and provide important insight into the fundamental physics of neutron stars. Using the newly installed Puertorican Ultimate Pulsar Processing Instrument (PUPPI), we will create phase connected ephemerides for exotic and faint pulsar systems. The increased bandwidth of PUPPI as compared to WAPP will allow us to discover pulsars 2 times fainter than previously possible. Analysis of the data will take place on a 96-node Beowulf cluster located at the NRAO headquarters in Charlottesville, VA for quick analysis. We are requesting a total of 70 hours of observations at L-band over the course of one year, with an observation per day for the first ten days, then additional observations taken approximately once every other week there after.

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Remote Observing Request

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

Instrument Setup

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned