

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Pulsars
 Observation Category:
 Total Time Requested: 6 Hours
 Minimum Useful Time: 45 minutes

Proposal Title: Continued timing of a millisecond pulsar in a stellar triple system

ABSTRACT:

We have discovered and are successfully timing a relatively bright millisecond pulsar in a hierarchical stellar triple system. The inner binary comprises a millisecond pulsar in a 1.6-day orbit with a hot, low-mass white dwarf. Yet this inner binary is being orbited by a likely 0.2–0.5 solar-mass star of unknown type in a 327-day orbit. This unique pulsar, and the supremely high-precision measurements of secularly varying orbital parameters provided by millisecond pulsar timing, will eventually be a testbed for the dynamics of 3-body systems. With a new timing model we are currently working on, we expect a full “solution” of the system, including inclinations of the orbits and precise masses for all three stars, this year.

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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