Technical Page

This proposal has not been submitted before.

Proposal Type: Director Discretionary Time
General Category: Pulsars
Observation Category: Pulsar Timing
Total Time Requested: 14 Hours
Minimum Useful Time: 2hrs

Proposal Title: Confirming the Orbit of Possible Double Neutron Star System: J0453+16

ABSTRACT:
The pulsar J0453+16 has a period of 45 ms and was discovered by the Arecibo 327 MHz drift survey (AO327). Recent follow-up observations (P2790) have revealed that it is in a potential double neutron star system. Another recent discovery, J0509+08, is a very bright, binary millisecond pulsar (MSP) with a period of 4.06 ms that may be useful in the efforts to detect gravitational waves using a pulsar timing array. We request 2 hours daily over one week to confirm the orbit of PSR J0453+16 and perform initial follow-up of PSR J0509+08, including solving its orbit.

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<tr>
<th>Name</th>
<th>Institution</th>
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<th>Student</th>
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<tbody>
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Remote Observing Request

- [X] 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

1115-1730

This proposal requires Iridium RFI protection at 1612 MHz between 10pm and 6am EST.
This proposal requires coordination with Punta Salinas radar within the band 1222-1381 MHz.
This proposal requires coordination with GPS L3 at 1381 MHz.