This proposal has not been submitted before.

Proposal Type: Regular
General Category: Pulsars
Observation Category: 
Total Time Requested: 27 Hours
Minimum Useful Time: 1.5 hours

Proposal Title: Expanding the NANOGrav Pulsar Timing Array

ABSTRACT:
Direct detection of gravitational waves (GWs) is a major goal in experimental physics and will open an entirely new astronomical spectrum. Precision millisecond pulsar (MSP) timing stands an excellent chance of being the first method to accomplish this feat. Combining data from many objects into a Pulsar Timing Array (PTA) makes GW detection possible. Increasing the number of pulsars in the array improves sensitivity, so NANOGrav is aggressively searching for pulsars suitable for inclusion in PTAs. In this proposal, we request time to observe eight newly-discovered pulsars, and three older pulsar discoveries that have not yet been evaluated using new instrumentation. We expect several of these pulsars may be useful additions to the NANOGrav project.

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

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

Instrument Setup

430 G L-wide S-low

Atmospheric Observation Instruments:

Special Equipment or setup: All observations will use the PUPPI pulsar backend.

RFI Considerations
Frequency Ranges Planned

420 - 440
1150 - 1800
1700 - 2400

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

This proposal requires coordination with GPS L3 at 1381 MHz.