

## Technical Page

Proposal Type: Regular  
 General Category: Pulsars  
 Observation Category: Galactic  
 Total Time Requested: 45 Hours  
 Minimum Useful Time: 1.5

**Proposal Title:** Precision Millisecond Pulsar Timing

*ABSTRACT:*

We will extend our high precision millisecond pulsar timing program by observing nine millisecond pulsars at six-week intervals over the upcoming trimester. Scientific payoffs of the program include improved neutron star mass measurements, more precise pulsar distance measurements, and eventual detection of (or more stringent limits on) the gravitational wave background. We have recently joined forces with other observing groups and other observatories to form North American and international collaborations to coordinate efforts and maximize efficient use of telescope resources while pursuing a goal of detecting of gravitational waves through pulsar timing. Various options are being considered for future Arecibo observations, including changes in source lists. In the interim, we wish to continue our existing program of sources and frequencies for at least one further trimester. This proposal serves as a continuation for two previously independent projects, P2286 and P2308.

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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                      327

### Atmospheric Observation Instruments:

**Description of Observer Equipment:** ASP data acquisition system

**Special Equipment or setup:** none

## **RFI Considerations**

### **Frequency Ranges Planned**

310-350

420-440

1120-1620

2300-3000

3000-4000