

### Technical Page

Proposal Type: Regular  
 General Category: Pulsars  
 Observation Category:  
 Total Time Requested: 76 Hours

**Proposal Title:** Exploring Pulsar Magnetospheric Dynamics via Nulling, Moding and Drifting  
*ABSTRACT:*

New insights have been gained in recent years through the study of pulsar drifting and nulling. Under proposals P1639 and P1734 the Arecibo sky has been surveyed for pulsars exhibiting expecially interesting pulse-modulation phenomena—i.e. nulling, drifting, moding and their interactions. Studies of pulsar B0943+10 and B0809+74 have been especially insightful—and continue to be—and many questions now turn on how other pulsars do and do not resemble these stars both physically and observationally. We request time to conduct follow-up observations pursuant to the above programs. Generally, we made short exploratory observations of many pulsars under the above two programs. Here we request time to observe those fewer pulsars discovered to exhibit physically interesting phenomena for longer periods on a given day as well as to make needed additional observations on crucial well known stars (e.g., B0943+10).

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**Service Observing Request**

**Remote Observing Request**

- |                                     |                            |                                     |       |
|-------------------------------------|----------------------------|-------------------------------------|-------|
| <input checked="" type="checkbox"/> | None                       | <input type="checkbox"/>            | No    |
| <input type="checkbox"/>            | All of the observing run.  | <input checked="" type="checkbox"/> | Maybe |
| <input type="checkbox"/>            | Part of the observing run. | <input type="checkbox"/>            | Yes   |
| <input type="checkbox"/>            | Queue Observing            |                                     |       |

**Instrument Setup**

610      L-wide                      327

**Atmospheric Observation Instruments:**

**Special Equipment or setup:** This is a simple program instrumentally. It would require only one WAPP at the lower frequencies, and four WAPPs to cover the L-wide passband. The observations would be either archived or moved on to our UVM raid array which is resident at AO, monster0.

## RFI Considerations

### Frequency Ranges Planned