

### Technical Page

Proposal Type: Regular  
 General Category: Pulsars  
 Observation Category: Galactic  
 Total Time Requested: 60 Hours

**Proposal Title:** Subpulse fluctuation properties of northern pulsars

**ABSTRACT:**

Recent high-quality single-pulse observations of drifting subpulses have been interpreted, within the framework of generally accepted aspects of pulsar theories, using new analysis techniques. This has opened up the possibility of reconstructing maps of circulating patterns underlying the emission from the pulsar polar region and studying the stability/evolution of such patterns. It is clear that the details of such patterns and their circulation hold valuable clues about the electrodynamics in the acceleration region, and hence the relevant quantities need to be measured for a sizable number of pulsars spanning a range of periods, magnetic fields and emission geometries. Subpulse fluctuation properties have been examined for only a limited number of conal-type northern pulsars so far and there is a need to identify more of examples suitable for detailed study. We propose to observe at L-band a sample of about 90 (conal-type) northern pulsars for preliminary analysis of their fluctuation properties to search for suitable candidates for future more detailed study.

Name	Institution	E-mail	Phone	Student
Avinash A. Deshpande	Arecibo Observatory, NAIC and RRI, Bangalore	desh@naic.edu	(+1) 787 878 2612	no

**Service Observing Request**

**Remote Observing Request**

- None
- All of the observing run.
- Part of the observing run.
- Queue Observing

- No
- Maybe
- Yes

**Instrument Setup**

L-wide      L-narrow

**Atmospheric Observation Instruments:**

**Special Equipment or setup:** none

## **RFI Considerations**

### **Frequency Ranges Planned**

1280 - 1500

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

This proposal requires coordination with GPS L3 at 1381 MHz.