

Technical Page

Proposal Type: Regular
 General Category: Pulsars
 Observation Category: Galactic
 Total Time Requested: 34.5 Hours

Proposal Title: Understanding the Emission Geometry of Radio Pulsars

ABSTRACT:

In order to better understand the emission geometry of radio pulsars – specifically the location and distribution of the emission regions in the magnetosphere – we propose to observe 10 carefully selected pulsars at frequencies of 430 MHz and 1175 MHz, using the PSPM and WAPP pulsar back-ends, respectively. The single pulse data obtained will be analyzed using a new method developed by us to detect faint and overlapping emission components in the profiles and thereby to get the detailed emission geometry for these pulsars. The results from this study would be important for understanding pulsar emission mechanisms. The proposal calls for a total of 34.5 hours of telescope time.

Name	Institution	E-mail	Phone	Student
Yashwant Gupta	NCRA-TIFR	ygupta@ncra.tifr.res.in	91 20 5651384	no

I do NOT want to do remote observing.

Instrument Setup

430 G 610 L-wide 430 CH receiver L-narrow

Atmospheric Optical Instruments:

Special Equipment or setup: Several Mammoth 1 and 2 tapes.

RFI Considerations

Frequency Ranges Planned

425-435 (or 50 MHz if available)
 1100-1300
 (we may possibly use 710 MHz receiver
 in place of L-band for some brighter
 targets)

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

This proposal requires coordination with GPS L3 at 1381 MHz.

This proposal requires coordination with AFTWF within the band 425-435 MHz.