

Technical Page

Proposal Type: Regular
 General Category: Pulsars
 Observation Category: Galactic
 Total Time Requested: 15 Hours
 Minimum Useful Time: 2 hours

Proposal Title: Nanostructure in the Millisecond Pulsar Giant Pulses

ABSTRACT:

The first discovered of the millisecond pulsars, PSR B1937+214, is known to emit extremely short pulses which are much brighter than the average pulse. We propose to make the highest time resolution measurements possible on this pulsar to compare its temporal and spectral emission with the giant pulses of the Crab Nebula pulsar, and to test whether existing models of the pulsar radio emission model are appropriate for explanation of the millisecond pulsar.

Name	Institution	E-mail	Phone	Student
Timothy H Hankins	New Mexico Institute of Mining and Technology	thankins@nrao.edu	(575) 835 7326	no

Remote Observing Request

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

Instrument Setup

C S-low X-high

Atmospheric Observation Instruments:

Description of Observer Equipment: The New Mexico Tech Ultra High Time Resolution System, as currently installed at the Observatory, plus a new realtime dedisperser to be used to trigger our system when a pulse exceeds a preset threshold.

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

2100-2350

4000-5000

8000-10500