

## Technical Page

Proposal Type: Regular  
 General Category: Pulsars  
 Sub-Category: Continuum  
 Observation Category:  
 Total Time Requested: 24 Hours

**Proposal Title:** Ultra Wide Bandwidth Observations of the Crab “Giant” Pulses

**ABSTRACT:**

We propose to use the wide bandwidth receivers afforded by the Gregorian feed systems in conjunction with our fast voltage recording systems to record a high time resolution, complete sample of the “giant” pulses from the Crab Nebula pulsar. The observations will be used to disentangle the propagation effects of the pulsar magnetosphere, the Crab Nebula and ISM, to constrain theoretical models of the pulsar emission process, and to study the spatial and temporal distribution of the emitting regions.

Name	Institution	E-mail	Phone	Student
Timothy H Hankins	New Mexico Tech	thankins@NRAO.edu	(505)835-7326	no

**Service Observing Request**

**Remote Observing Request**

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

**Instrument Setup**

430 G      610      L-wide      S-low   C   X-high   327

**Atmospheric Observation Instruments:**

**Description of Observer Equipment:** We will use the New Mexico Tech pulsar system currently

installed in the equipment room.

**Special Equipment or setup:** We will require the 1-2 GHz Base Band Mixer which was constructed by NAIC for our use last March.

**RFI Considerations**

## Frequency Ranges Planned