Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
General Category: Pulsars
Observation Category:
Total Time Requested: 5.7 Hours
Minimum Useful Time:

Proposal Title: High Time Resolution Polarimetry of the Crab Pulsar

ABSTRACT:
Numerous studies of the Crab pulsar showed that it is not playing by the rules set for other rotation powered pulsars. It shows seven radio emission components in its average profile (two are also visible at high energies), more than currently known for any other pulsar. The frequency dependence of these components and the difference in polarimetry between radio and optical emission add to the complexity of this pulsar. Optical studies are consistent with existing models to a certain extent, but radio studies show a different picture. We propose simultaneous observations with the Arecibo telescope in baseband mode and the Gemini South optical telescope using the GASP high speed pulsar polarimeter. Changes in shape or polarization if optical pulses simultaneous with radio giant pulses would imply changes in emission altitude and plasma density.

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<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>E-mail</th>
<th>Phone</th>
<th>Student</th>
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</thead>
<tbody>
<tr>
<td>Natalia Lewandowska</td>
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<td>3042936895</td>
<td>no</td>
</tr>
</tbody>
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Remote Observing Request

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

Instrument Setup

C

Atmospheric Observation Instruments:

Special Equipment or setup: none
RFI Considerations

Frequency Ranges Planned

This proposal requires Iridium RFI protection at 1612 MHz between 10pm and 6am EST.
This proposal requires coordination with GPS L3 at 1381 MHz.