Section I - General Information

Submitted for Sep 1 2014.

This proposal has been submitted before.

The previous proposal number is P2030.

Proposal Type: Large
General Category: Pulsars
Observation Category: Galactic
Time Requested this semester: 197
Hours already used for this project: 1938
Additional Hours required to complete project: 1133
Minimum Useful Time: 1.5
Expected Data Storage: over 500 GB

Proposal Title: Continuing the PALFA Galactic Plane Survey

ABSTRACT:

We propose to continue the PALFA survey of the Arecibo-visible Galactic Plane. The most sensitive pulsar survey ever done, PALFA is yielding high-impact science in a variety of astrophysical fields, including: fast radio bursts, high-precision tests of relativistic gravity theories, constraints on the equation-of-state of supra-nuclear matter, detectability of gravitational waves, and unification of the neutron star zoo. Additionally this survey constrains fundamental properties of the overall neutron-star population. PALFA has already discovered 138 pulsars, nearly doubling the number known in the region being surveyed, and will uncover many more pulsars in the future.
<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>E-mail</th>
<th>Phone</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria M. Kaspi</td>
<td>McGill University</td>
<td><a href="mailto:vkaspi@physics.mcgill.ca">vkaspi@physics.mcgill.ca</a></td>
<td>5143986412</td>
<td>no</td>
</tr>
<tr>
<td>James Cordes</td>
<td>Cornell University</td>
<td><a href="mailto:cordes@astro.cornell.edu">cordes@astro.cornell.edu</a></td>
<td>6072550608</td>
<td>no</td>
</tr>
</tbody>
</table>

Additional Authors

- B. Allen bruce.allen@aei.mpg.de
- S. Bogdanov
- slavko@astro.columbia.edu
- A. Brazier
- abrazier@astro.cornell.edu
- F. Camilo
- fernando@astro.columbia.edu
- F. Cardoso rcardoso@mix.wvu.edu (grad student)
- S. Chatterjee
- shami@astro.cornell.edu
- F. Crawford fcrawfor@fandm.edu
- J. Deneva deneva@naic.edu
- R. Ferdman
- rferdman@physics.mcgill.ca
- J. Hessels J.W.T.Hessels@uva.nl
- F. Jenet fredrickajenet@gmail.com
- C. Karako-Argaman
- karako@physics.mcgill.ca (grad student)
- B. Knispel
- Benjamin.Knispel@aei.mpg.de
- P. Lazarus plazarus@mpifr
- bonn.mpifr.de (grad student)
- K. Lee kjlee@mpifr.bonn.mpifr.de
- R. Lynch rlynch@physics.mcgill.ca
- A. Lyne
- andrew.lyne@manchester.ac.uk
- E. Madsen
- madsense@physics.mcgill.ca (grad student)
- M. McLaughlin
- maura.mclaughlin@mail.wvu.edu
- S. Ransom sransom@nrao.edu
- P. Scholz pscholz@physics.mcgill.ca (grad student)
- X. Siemens
- siemens@gravity.phys.uwm.edu
- L. Spitler laura.spitler@gmail.com
- I. Stairs stairs@astro.ubc.ca
- more authors at http://www2.naic.edu/alfa/pulsar/

This work is part of both a PhD and a MS thesis.

**Remote Observing Request**

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

**Section II - Time Request**

The following times are in LST.

For these observations night-time is not needed.

<table>
<thead>
<tr>
<th>Begin – End Interval–Interval</th>
<th>Days Needed at This Interval</th>
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<tbody>
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<td>18 – 20:58</td>
<td>66</td>
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Time Constraints (Must Be Justified in the Proposal Text)

Section III - Instruments Needed

ALFA

Atmospheric Observation Instruments:

Special Equipment or setup:  none

Section IV - RFI Considerations

Frequency Ranges Planned

1215-1536

This proposal requires coordination with Punta Salinas radar within the band 1222-1381 MHz.
This proposal requires coordination with GPS L3 at 1381 MHz.

Section V - Observing List

Target List

We are searching the Galactic Plane with |b|<2 degrees.