Proposal Identification No.: P Date Received: 2009-Dec-26_05:38:34

Mail hard copies to:
Dr. Michael Nolan , Director
Arecibo Observatory
HC 3 Box 53995
Arecibo, PR 00612 U.S.A.

ARECIBO OBSERVATORY
NATIONAL ASTRONOMY AND
IONOSPHERE CENTER
OBSERVING TIME REQUEST
COVER SHEET

We are indebted to our user community for their continued support of the Arecibo Observatory, Puerto Rico.

Section I - General Information

Submitted for special 2009.

This proposal has not been submitted before.

Proposal Type:	Director Discretionary Time
General Category:	Pulsars
Observation Category:	Galactic
Total Time Requested:	14 Hours
Minimum Useful Time:	0.75 hours
Expected Data Storage:	100-500 GB

Proposal Title: Two New Bright Millisecond Pulsars Coincident with Fermi Unidentified Sources

ABSTRACT:

Under GBT/Fermi project GLAST021296, we have observed 47 unidentified Fermi gamma-ray sources not contained in the Fermi "Bright Source List" to search for radio pulsations. Our analysis of these data is roughly 50% complete, and we have already discovered 5 millisecond pulsars, two of which are within the declination range visible with Arecibo. These sources will undoubtedly shed light on the nature of Galactic gamma-ray sources and are likely very interesting pulsars in their own right. We plan to announce these discoveries at the January AAS along with a multi-institution press release. Here we propose an exploratory set of observations of the two Arecibo-visible sources to determine how to proceed at the next regular proposal deadline.

Name	Institution	E-mail	Phone	Student
Jason WT Hessels	ASTRON (Netherlands Institute for Radio Astronomy)	j.w.t.hessels@uva.nl	+31(0)610260062	no
Mallory SE Roberts	Eureka Scientific	malloryr@gmail.com		no

Additional Authors

Maura McLaughlin (maura.mclaughlin@mail.wvu.edu)
Scott Ransom (sransom@nrao.edu)
Paul Ray (paul.ray@navy.nrl.mil)
Priya Bangale (priyadarshini.bangale@gmail.com)
Fernando Camilo (fernando@astron.columbia.edu)
Mathew Kerr (mathew.kerr@gmail.com)

I will not need financial support.

This work is part of a MS thesis.

Remote Observing Request

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

Section II - Time Request

The following times are in LST.

Begin – End Interval–Interval	Days Needed at This Interval
00:00 – 00:45	9
17:45 – 18:30	9
–	
–	

Time Constraints (Must Be Justified in the Proposal Text)

The gridding observations (2 sessions in each of the two required time slots) must be scheduled before the timing observations.

For the part of this proposal in which we will be constructing a timing solution, we need the right cadence of observing days: 1,2,3,5,8,11, and 14. See proposal.

Section III - Instruments Needed

327 ALFA

Atmospheric Observation Instruments:

Special Equipment or setup: none

Section IV - RFI Considerations

Frequency Ranges Planned

300 - 350
1120 - 1220
1370 - 1570

Section V - Observing List

Target List

00:23:00 +09:00:00 Millisecond Pulsar
18:10:00 +17:00:00 Millisecond Pulsar