Proposal Identification No.: P2860
Date Received: 2013-Aug-30 20:51:06

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
General Category: Pulsars
Observation Category: Galactic
Total Time Requested: 55.5 Hours
Minimum Useful Time: 1.5 h

Proposal Title: Searching for Millisecond Pulsars in Low-Latitude Fermi Unidentified Sources

ABSTRACT:
We propose to search for pulsars in fourteen Fermi unidentified sources close to the Galactic plane (|b| < 4 degrees). Such searches have been extremely successful at high Galactic latitudes and low frequencies (327 - 820 MHz). The denser ionized gas environment in the Galactic plane necessitates using higher frequencies in order to minimize scattering and dispersion broadening. We plan to search these sources at 1400 MHz. The benefits of potential discoveries include tests of theories of gravity via timing of binary pulsars, facilitating gravitational wave detection through expanding the set of objects included in pulsar timing arrays, and studying the pulsar emission mechanism at various energies.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>E-mail</th>
<th>Phone</th>
<th>Student</th>
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<tbody>
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</tbody>
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Remote Observing Request

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

Instrument Setup

ALFA

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations
Frequency Ranges Planned

1225 - 1525

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