This proposal has been submitted before.

The previous proposal number is P2886.

Proposal Type: Regular
General Category: Pulsars
Observation Category: Transient
Total Time Requested: 10 Hours
Minimum Useful Time: 1 hour

Proposal Title: Follow-up of the First Fast Radio Burst Discovered with Arecibo

ABSTRACT:

Fast radio bursts (FRBs) are a new class of short-duration radio bursts discovered in archival data from pulsar surveys. FRBs may represent a new class of astrophysical sources at extragalactic distances — inferred from their large dispersion measures. Seven FRBs are now in the published literature with the first six discovered by the Parkes Radio Telescope in Australia. Recently, Arecibo became the first independent telescope to confirm the existence of FRBs when a burst was discovered by the Pulsar ALFA survey. No repeat events have been seen from any FRB sky position, although most follow-up has been fairly limited. We propose to follow-up the Arecibo FRB with a larger field-of-view, more time, and greater range of observing frequencies than has been done for any other FRB. As repeatability (or lack thereof) is crucial to understanding the nature of these sources, systematic and thorough follow-up is essential.

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

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

Instrument Setup

327 ALFA

Atmospheric Observation Instruments:
Special Equipment or setup: Both ALFA and the 327 MHz receivers are needed for each session.

RFI Considerations

Frequency Ranges Planned

302 - 352
1214 - 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.