Technical Page

This proposal has been submitted before.

The previous proposal number is 3334.

Proposal Type: Urgent
General Category: Pulsars
Observation Category: fast radio burst
Total Time Requested: 30 Hours
Minimum Useful Time: 1

Proposal Title: Observation of a repeating Fast Radio Burst Discovered by CHIME

ABSTRACT:

Fast Radio Bursts, first discovered in 2007, are bright, millisecond radio transients, whose origins and properties remain mysterious despite an expanding catalog of bursts. The discovery of repeating burst FRB 121102 opened a new window to more detailed study of FRB properties, and detection of more repeating FRBs promises to expand our understanding further. CHIME/FRB is a new project, searching for FRBs between 400-800 MHz with 0.983 ms time resolution and incoherent dedispersion. CHIME/FRB recently published 13 new bursts including a new repeater, but has discovered many more unpublished bursts, including more repeaters. We propose to observe a new repeating Fast Radio Burst (FRB) detected by CHIME/FRB, FRB 190116.190116.J1249+27 using the Arecibo Observatory 327 MHz receiver. Observing with AO will allow us to search for repeated bursts with much higher sensitivity and time resolution, improving our understanding of burst structure and properties.

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<thead>
<tr>
<th>Name</th>
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Remote Observing Request

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

Instrument Setup

327

Atmospheric Observation Instruments:
Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned
302 - 352