

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Pulsars
 Observation Category: Extragalactic
 Total Time Requested: 100 Hours
 Minimum Useful Time: 40 mins

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

Fast Radio Bursts are bright, millisecond radio transients, which 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 further repeating FRBs promises to expand our understanding further. CHIME/FRB is a relatively new project, searching for FRBs between 400-800 MHz with 0.983 ms time resolution and incoherent dedispersion. Since summer 2018, CHIME/FRB has published 9 new repeating FRBs, as well as a burst from FRB 121102 and a burst from ASKAP FRB 171019. We propose to observe two new repeating FRBs detected by CHIME/FRB, FRB 190116.J1249+27 and FRB 190117.2207+17 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, luminosity distribution, rate, polarization, pulse width, and dispersion measure variation.

Name	Institution	E-mail	Phone	Student
Deborah Good	University of British Columbia	dgood@phas.ubc.ca	6043293658	G

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