

Technical Page

This proposal has been submitted before.

The previous proposal number is 3054.

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

Proposal Title: Monitoring the Repeating Fast Radio Burst FRB 121102

ABSTRACT:

FRB 121102, discovered with Arecibo in 2013, is the first of now eleven known repeating fast radio bursts. Nevertheless, the astrophysical nature of repeating FRBs is still not understood. We do know that FRB 121102 is located in a star forming region within a low-metallicity dwarf galaxy at a redshift of 0.193. In the last year we have conducted a number of detailed studies into the bursts' complex spectro-temporal structure. In addition, we discovered that FRB 121102's dispersion measure and rotation measure are time variable, the latter having decreased by 30% over three years. Further observations are needed to understand FRB 121102's nature, and in particular long-term monitoring of the source's dispersion measure and rotation measure are key to distinguishing the two proposed origin models.

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Remote Observing Request

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

Instrument Setup

L-wide C

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned