

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Astronomy
 Observation Category: Extragalactic
 Total Time Requested: 100 Hours
 Minimum Useful Time: 1.00

Proposal Title: Searching for Fast Radio Bursts from Gamma-ray Bursts Remnants.

ABSTRACT:

The repeating FRB121102 was recently located in a star forming galaxy at $z=0.193$ and is associated with a steady ('quiescent') non-thermal radio source. Based on repetition and energetics, one possibility is that source is a new-born millisecond pulsar or a magnetar, that powers the bursts and also the radio nebula. It is being shown that the properties of the FRB121102 host galaxy are remarkably consistent with the Long duration Gamma-ray bursts (LGRBs) and super luminous supernova (SNSNe-I). The observed similarities between the host galaxies suggests that it too shares a similar progenitors. We propose to observe the LGRBs, with timescales of few years after their explosions, whose X-ray light curve shows light curve signature of a magnetar central engine. We intend to blindly search for FRBs from target sources and also test the LGRB/SLSNe-I/FRB connection. We request 25 one-hour observations per target source for a total of 100.0 hours of observing time.

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Remote Observing Request

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

Instrument Setup

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

This proposal requires Iridium RFI protection at 1612 MHz between 10pm and 6am EST.

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

This proposal requires coordination with GPS L3 at 1381 MHz.