

Technical Page

This proposal has not been submitted before.

Proposal Type: Urgent
 General Category: Pulsars
 Observation Category: Extragalactic
 Total Time Requested: 12 Hours
 Minimum Useful Time: 60 min

Proposal Title: Simultaneous Monitoring of the Repeating Fast Radio Burst with Arecibo and INTEGRAL

ABSTRACT:

The repeating fast radio burst (FRB 121102) has been localized to a low metallicity dwarf galaxy at a redshift of 0.2. This galaxy shares many properties with the hosts of energetic transients such as superluminous supernova and long gamma-ray bursts, which are thought to be powered by the birth of a young, millisecond magnetar. One of the leading theories to explain FRB 121102 is that we are observing one of these magnetars several decades later. Magnetars are also prodigious emitters of X-rays. We have been granted time on the INTEGRAL satellite to look for hard X-ray bursts. Note, INTEGRAL observes at a higher X-ray band than previously used for FRB 121102. Because the search in X-rays is more constraining when radio bursts are simultaneously detected, we are requesting Arecibo observations on the six days that overlap with the two INTEGRAL orbits.

Name	Institution	E-mail	Phone	Student
Laura G Spitler	Max Planck Institute for Radio Astronomy	lspitler@mpifr-bonn.mpg.de	49228525314	no

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

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

This proposal requires coordination with GPS L3 at 1381 MHz.