

Technical Page

This proposal has not been submitted before.

Proposal Type: Urgent
 General Category: Pulsars
 Observation Category: Galactic
 Total Time Requested: 6 Hours
 Minimum Useful Time: 1 hr

Proposal Title: Arecibo Observations of the Possible New Magnetar Swift J1935+2154

ABSTRACT:

We want to observe a likely new magnetar, in order to detect radio pulsations that could identify the pulsation period and confirm the magnetar nature. This alone would be interesting as we know of only 2 dozen such objects in the Galaxy, but moreover, we know of only 4 radio emitters so each new such source is valuable. Major open questions in magnetar astrophysics are: how many magnetars are there in the Galaxy? what is their magnetic field distribution? why are some neutron stars born as magnetars and others not? what is the nature of matter in such ultra strong magnetic fields? Should we discover pulsations from this source, we'd subsequently request timing observations to measure the spin-down rate and hence estimate the surface dipolar field, as well as monitor the radio flux density to compare with the flux measured in X-rays, which will hopefully be done in our accompanying NASA Swift ToO proposal.

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Remote Observing Request

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

Instrument Setup

S-low

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned