

Technical Page

This proposal has not been submitted before.

Proposal Type: Director Discretionary Time
 General Category: Pulsars
 Observation Category: Galactic
 Total Time Requested: 10 Hours
 Minimum Useful Time: 45 minutes

Proposal Title: Searching for Pulsed Radio Emission from the Magnetar SGR 1935+2154
ABSTRACT:

Magnetars are rare neutron stars with extremely high magnetic fields, which display X-/gamma-ray outbursts frequently but irregularly. Few magnetars have shown radio pulsations, but they turn out to be intermittent and different in their properties compared with regular radio pulsar emission. We request Director Discretionary Time to search for pulsed radio emission from the magnetar SGR 1935+2154, which was discovered in July 2014 and recently became burst active again in X-/gamma-rays. With a detection we would be able to establish the spin down rate and the magnetic field strength, and compare the radio and X-ray timing properties of the source. This would provide a rare set of observations to address the nature of pulsed magnetar radio emission, allow a better study of the putative evolutionary link between magnetars and radio pulsars, and enable a better understanding of the neutron star population as a whole.

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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

1200 - 1700

4500 - 5500