

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Pulsars
 Observation Category: Galactic
 Total Time Requested: 3 Hours
 Minimum Useful Time: 2

Proposal Title: The broadband behaviour of Crab Giant Pulses

ABSTRACT:

Giant pulses from the Crab pulsar (J0534+2200) are a relatively well studied phenomenon at multiple frequencies over several epochs, however, simultaneous wideband observations extending to metre-wavelengths are rare. Being able to densely sample the broadband spectral behaviour of giant-pulse emission will provide valuable constraints on emission models and allows us to compare and contrast them with those applicable to the general pulsar population and Fast Radio Bursts. We request 3 hours of high-time resolution observation of the Crab pulsar, to be made contemporaneously with the Long Wavelength Array and the Green Bank Telescope. This will form a major part of a global campaign to observe the Crab with multiple telescopes to achieve a frequency coverage of 20-8000 MHz within a short time span. The data will enable us to further constrain the spectrum and distribution of giant pulse energies and characterise its broadband temporal structure, thus elucidating the underlying physics.

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Remote Observing Request

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

Instrument Setup

327

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

302 - 352