

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Continuum
 Observation Category: Galactic
 Total Time Requested: 10 Hours
 Minimum Useful Time:

Proposal Title: Full Stokes 327 MHz Continuum Observations of the GALFACTS Pilot Region
ABSTRACT:

The GALFACTS (GALFA Continuum Transit Survey) continuum-polarization pilot program used both the L-Band Wide (Program A1863) and ALFA (A1947) receivers. For each of these, an area of 15 deg x 1 deg was imaged in full-Stokes mode. The resultant polarization images (band-averaged Stokes Q and U) reveal rich structure which is not reflected in the Stokes-I image. We now propose to observe the full-Stokes continuum emission within this region at 327 MHz using the Arecibo telescope. Combining the proposed new observations with the above L-band images (smoothed to the 327-MHz resolution) would allow decomposition of the spectacular polarization structure as a function of Faraday depth (i.e. Rotation Measure) using Faraday Tomography. This will reveal the distributions of both the diffuse non-thermal emission and the magneto-ionic medium along the line-of-sight. We request a total of 10 hours of telescope time for these meridian NODding scan observations including the time to map calibrator sources.

Name	Institution	E-mail	Phone	Student
Wasim Raja	Raman Research Institute	wasim@rri.res.in	+91-80-23610122 (ext. 240)	G

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

312-342