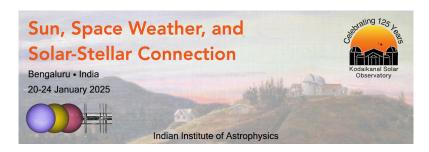
## Sun, Space Weather, and Solar-Stellar Connection



Contribution ID: 184 Type: Contributed talk

## The Gauribidanur Radio Observatory: Current Status and Future Plans

Wednesday, January 22, 2025 4:05 PM (15 minutes)

The Gauribidanur Radio Observatory (GRO) is one of a few solar radio observatories functioning for the past few decades. It has four major facilities, viz., the Gauribidanur RAdioheliograPH (GRAPH), the Gauribidanur LOw-frequency Solar Spectrograph (GLOSS), the Gauribidanur Radio Interferometric Polarimeter (GRIP), and the Gauribidanur RAdio Spectro-polarimeter (GRASP). The GRAPH simultaneously images the Sun at two spot frequencies, viz., 53 and 80 MHz, during its local meridian transit; the spatial resolution at 80 MHz is  $4'\times7'(RA\times Dec.)$ , and the image-dynamic range is  $\approx22$  dB. The GLOSS observes the Sun as a point source and produces the solar radio dynamic spectrum in 50-500 MHz over 2:30-10:30 UT. The frequency resolution and the dynamic range of a dynamic spectrum are  $\approx500$  kHz and 40 dB, respectively. The GRIP observes the polarized radio emission from the Sun in 30-130 MHz over 2:30-10:30 UT. The dynamic range of the total and circularly polarized flux profiles is  $\approx30$  dB and has a spectral resolution of about 1.5 MHz. The GRASP observes the Sun as a point source and produces the dynamic spectra of the total and circularly polarized flux in the 15-35 MHz during 2:30-10:30 UT. The spectra have a dynamic range of  $\approx30$  dB and a spectral resolution of 2 kHz. Apart from the solar facilities, we have recently established a new small array to observe the non-solar radio transients, the Pulsars, FRBs, etc. The talk will briefly cover the observing facilities, highlight the results, the ongoing facility upgrade, and the plans for the future.

## **Contribution Type**

## **Theme**

Energetic Phenomena

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Session Classification: Instruments/Facilities and Science: New and Upcoming