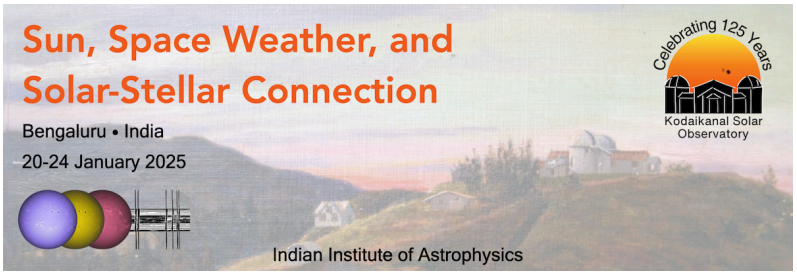

Contribution ID: **184** Type: **Contributed talk**

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′×7′(RA×Dec.), and the image-dynamic range is ≈22 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 ≈500 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 ≈30 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 ≈30 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

Primary authors: Mr G. V. S„ Gireesh (Indian Institute of Astrophysics); Mr BARVE, Indrajit (Indian Institute of Astrophysics); CHIDAMBARAM, Kathiravan; Prof. R, Ramesh (Indian Institute of Astrophysics)

Presenter: CHIDAMBARAM, Kathiravan

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