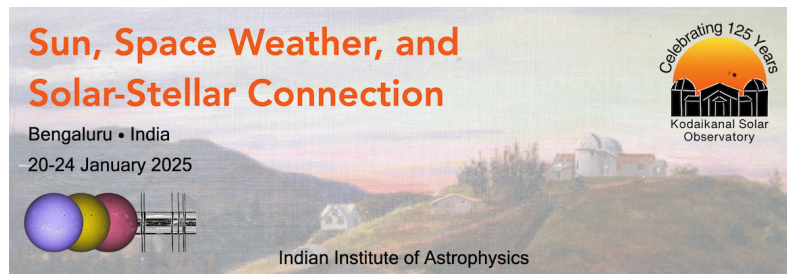


Sun, Space Weather, and Solar-Stellar Connection



Contribution ID: 138

Type: Poster

Solar High resolution Imaging with the 76 cm telescope of the Vainu Bappu Observatory

Ground-based telescopes have an inherent inability to attain diffraction-limited imaging due to the presence of the earth's atmospheric turbulence. Speckle imaging technique helps to achieve diffraction-limited imaging by post-processing a series of short exposure imaging. In this poster, we report ongoing work of obtaining high-resolution (sub-arc seconds) images of solar surface features with the 76 cm telescope of the Vainu Bappu Observatory. The entrance aperture of the telescope is masked with an annular mask to prevent heating due to the sunlight. The image formed by the telescope is suitably re-imaged with a combination of collimating and imaging lenses and a spectral filter to have suitable image plane sampling to enable diffraction-limited imaging. Speckle imaging is used to achieve high-contrast images with resolution down to the diffraction limit of the telescope. Preliminary results are presented.

Contribution Type

Poster

Theme

Solar Magnetism in High-Resolution

Primary author: RENGASWAMY, Sridharan (IIA)

Co-authors: Mr ANNAMALAISAMY, Ramachandran (Indian Institute of Astrophysics); Mr K, Sagayanathan; SUB-RAMANIAN, Saraswathi Kalyani (Indian Institute of Astrophysics)

Presenter: RENGASWAMY, Sridharan (IIA)