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Foreword

The commissioning of the 1.2 meter Infra-Red Telescope at Gurushikhar Observatory in Mt. Abu in 1994, by the Physical Research Laboratory, Ahmedabad was a major landmark in the history of Infra-red astronomy in India. Mt. Abu with its clear viewing sky and very low water vapour content for almost 8 months in a year, has turned out to be an ideal location for carrying out infra-red studies on star formation in molecular clouds, dust enshrouded environments of evolved stars and galaxies and active galactic nuclei. Equipped with the state-of-the-art back-end instrumentation, including fast read out photometer, optical polarimeter, imaging Fabry-Perot Spectrometer and NICMOS infra-red cameras, scientists at PRL have carried out significant observations of galactic and extra-galactic objects and a variety of solar system objects, such as comets, asteroids and giant planets, some of which are in collaboration with several institutions both from within and outside our country.

To commemorate a decade of IR astronomical observations at Mt. Abu, a 2 day symposium on "Infra-red and optical astronomy at Mt. Abu Observatory : The past decade and the future" was held at PRL during 15-16 December, 2004, to critically review the work carried out so far and chalk out the future program. The proceedings of this symposium, containing 27 scientific papers presented by active astrophysicists from all over India, cover investigations of a wide gamut of astrophysical objects in different wavelength regions, providing contemporary trends in observational astrophysics.

The major scientific highlights presented in the proceedings relate to the discovery of a helium nova, quadrapolar flow in a planetary nebula, lunar occultation observations to study dust envelopes around late type stars, outflows in massive star forming regions, high degree of variability in galactic nuclei, evolution of metals and dust in the early universe, and cosmic dust formation in several astrophysical objects and comets. It also includes a detailed description of ASTROSAT, India's first dedicated multi-wavelength astrophysical observatory in space, scheduled for launch in 2007.

I believe that the proceedings of this conference will be of great interest to all practicing astrophysicists and infra-red astronomers. I congratulate Dr. B.G. Anandarao and his colleagues for their meticulous compilation of the scientific papers and bringing out its publication in a short time of about 4 months after the conference.

2 May 2005
Bangalore

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