Japal-Rangapur Observatory, Osmania University

The Japal Rangapur Observatory (JRO) has a 48-inch or 1.2 m reflecting telescope located between the two villages, Japal and Rangapur, near the outskirts of Hyderabad, Telangana under the jurisdiction of Osmania University and all the Academic/scientific activates are looked after by the Principal & Director (I/C) and Department of Astronomy, University College of Science, Osmania University. It may be recalled the root of JRO was associated to the Nizamiah Observatory, which was originally established by the Nizam's government in 1908. After the foundation of the Osmania University in 1918, the observatory was formally transferred to its control in 1919.

After lot of efforts from Osmania University and others, Dr. Akbar Ali initiated the 48-inch telescope project in 1954. The construction of the observatory buildings and installation of the telescope was successfully completed in 1968-69 and the telescope started functioning since then. Along with this the observatory has two 12-inch telescopes for carrying out research and practical sessions for the PG students. The observatory also has a science park for general public and the Department of Astronomy compassionately involves in various outreach programmes for the general public and school students in order to stimulate their curiosity for science. Earlier outreach programs at the observatory for school children had a great impact on their thinking and motivated them immensely in the domain of astronomy and space research. The heart and soul of the observatory is to promote scientific research and create a perfect environment for future young minds.

After being installed, the scientific studies were commenced to unravel the mystery of stars and Universe. Many scientists and researchers from all over India and the world undertook studies of photometry& spectroscopy of stars, variable stars, comets, lunar occultation, star clusters and astrometry using this observational facility. There were many collaborative programmes, which were carried out using the 48-inch telescope. Scientists from Tata Institute of Fundamental Research (TIFR), Physical Research Laboratory (PRL), Indian Institute of Astrophysics (IIA) and the National Physical Laboratory (NPL) and other institutes collaborated with the scientists of this observatory.

. In addition to this, programmes in photometric and spectroscopic studies of binary systems and chemically peculiar stars in our galaxy lead to a deeper understanding of these celestial sources. Moreover theoretical research work on stellar structure and galactic dynamics are also being pursued based on the observational results. The rich tradition of national and international collaboration is amply reflected in the successful monitoring of the Total Solar Eclipse of February 16, 1980, the International Comet Halley Watch during 1984-86 and the recording of the impact of Comet Shoemaker-Levy on Jupiter in July 16- 22, 1994 performed at JRO.

. A total of 123 publications in reputed national and international journals were published and many received their Ph.Ds using data from this telescope.