

Exploring the frontiers of astronomy

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Kavalur, Jan. 19: The wonderful star-laden skies, source of eternal passion for astronomers, will be further opened up with the commissioning of the giant 2.3-metre Vainu Bappu telescope, Asia's largest, at the Indian Institute of Astrophysics (IIA) observatory in the wooded hills of Kavalur village in North Arcot district of Tamil Nadu.

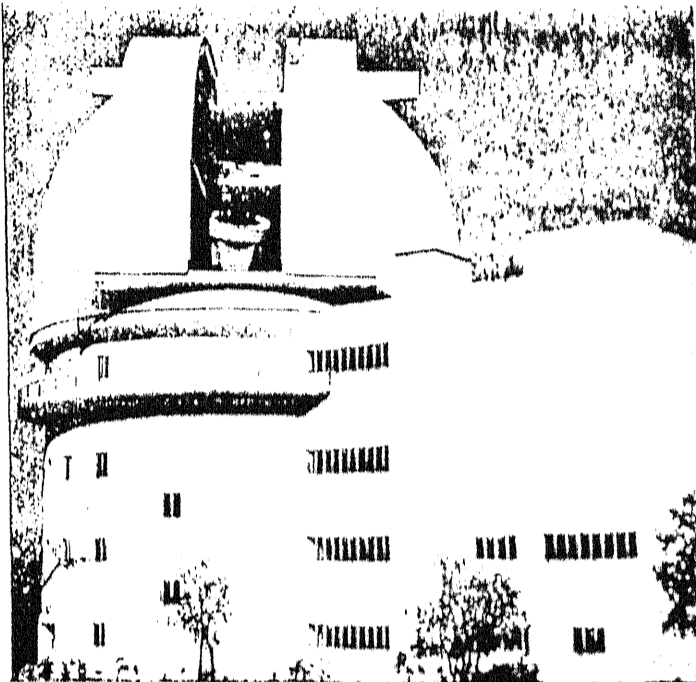
The glimmer of stars, scattered at incredible distances in the frontierless cosmos, becomes brighter and clearer with this powerful telescope which can vividly resolve the image of a 25 paise coin kept 40 km away.

The commissioning of the Rs. 6.5-crore telescope, named after its conceiver, the late Dr. K. V. Bappu, coincides with the completion of two centuries of astronomical observation in the country.

In scientific terms, the telescope aids research in areas like stellar chromospheres, the spiral structure of galaxy and the morphological and chemical composition of other galaxies. It enables the Indian astronomers to compete with the best observational facilities elsewhere in the world.

It had taken more than a decade for designing and fabrication of the telescope and to Dr. Vainu Bappu it was a life-time project, IIA Director J. C. Bhattacharya told a visiting team of newsmen from Bangalore.

The telescope's equatorially mounted horse-shoe-yoke structure was ideally suited for low altitudes and permitted easy observation near the celestial pole. The control system had been designed to an accuracy of one arc second, he said.



A view of the 2.3-metre telescope the top part of which is visible through the slit in the rotatable dome in the building at Kavalur.

Below the massive rotating dome of the telescope, is located a maze of computer systems for data analysis and image processing facilities, which would be finally linked to the telescope.

Along with the towering 2.3-metre telescope, there are seven

others of varying diameters dotting the sandalwood stretches of the observatory, enabling the astronomers a constant communion with the universe.

The one-metre telescope at Kavalur had been used in making three major discoveries in the solar system — the discovery of atmosphere

around Jupiter's satellite Ganymede, spotting of outer rings of Saturn in March 24 and 25, 1984, the first indication of which was signalled from spaceship voyager. The observatory had also recorded a good deal of data of the seventh 'lunar occultation' which would reveal new insights into composition of stars, Prof. Bhattacharya said.

Programmes for this year at the observatory included the monitoring of Comet Halley's trail passing through several stars. Prof. Bhattacharya said the IIA was discussing with Indian Space Research Organisation sending an astronomical payload on one of its future missions.

Despite the overbearing presence of giant telescopes, 6-inch telescope, donated by the American Association of Variable Observers (AAVSO) to an Indian amateur in 1920, still attracts the young 'star gazers'.

The tiny telescope is thrown open to all young amateurs in schools and colleges to help them explore the sky. The observatory staff would help them in handling the instrument.

The telescope had been given to Mr. Radha Gobind Chandra, a clerk in the Collector's office in Jessore now in Pakistan, Prof. Bhattacharya said.

Mr. Chandra in his old age wrote to the Association to take back the telescope as he could not continue his observations. But the Association gave it to yet another amateur in Hyderabad, Vainu Bappu, who bloomed into a pioneer of Indian astronomy later.