

The House that Raman built

K MANJULA
DH News Service

MEKHRI Circle, Bangalore. A junction that bears an authentic stamp of a 'disaster zone'. Scores of cars, buses and lorries zoom past in a mad hurry, belching out smoke in copious amounts. The shrill notes of vehicle horns jar your senses, and you need to make a speedy exit to your destination. Far from the madding crowd.

On one side of the very same Mekhri Circle is an innocuous looking road, paved by a modest number of trees, that give relief to the otherwise drab scenery. But as one looks closer at the roadmap ahead, one finds a tiny iron gate guarded by cheerful looking men. By the side of the gate is a small name plate which says 'Raman Research Institute'. You make a halt, and enter the campus.

You are greeted by royal emerald green splendour, and the heady smell of eucalyptus leaves. You catch a glimpse of the rather imposing-looking Institute building.

The Raman Research Institute has been the home of several great scientists, including Sir CV Raman himself. Chandrasekhar Venkataraman was born on 7th November, 1888, in Tiruvanaikkaval near Trichinopoly. Having obtained an MA degree, he then joined the Civil Services. But physics was his first love! So in 1917, he accepted the Palit professorship at Calcutta to pursue science. It was then that he discovered the 'Raman Effect' for which he was awarded the Nobel prize for Physics, in 1930. After a stint as the Director,

IISc, he founded the Raman Research Institute in Bangalore.

During the first 22 years of the Institute, the research work focused on light and colour. Problems on the propagation of light in crystals, optical activity, and the general theory of interference of wide-band partially polarised light, were investigated.

After Raman's death in 1972, the institute was reorganised to accommodate other topics in physics. These included the area of liquid crystals, astronomy and astrophysics, and theoretical physics. The liquid crystals lab at the institute has been engaged in activities on all aspects of the subject, ranging from the synthesis of materials, experimental studies and developmental work on liquid crystal displays.

The RRI has to its credit, three telescopes that are used for radioastronomy studies. A 10.4 m diameter millimeter-wave telescope is located in the campus. A decameter wave radio interferometer at Gauribidanur was also set up in collaboration with the Indian Institute of Astrophysics, Bangalore. A synthesis radio telescope in Mauritius operating at 150 MHz was built by RRI, in collaboration with the Indian Institute of Astrophysics, and the University of Mauritius. The Institute is also engaged in theoretical astrophysics, which includes subjects like the formation and evolution of neutron stars in binary systems, gravitational lenses, and several others.

A new initiative has been the study of optics, and to this end, a state-of-the-art lab has been set up with a view to studying coherent back scattering, imaging through turbid

Photo by the author



The picturesque RRI campus

media, atomic trapping and cooling, etc.

In October, 1998, the RRI has turned fifty. This year, as part of its Golden Jubilee celebrations, the institute has held several functions. The Open Day (National Science Day) was celebrated in 28 February, while in May-June, the institute held a summer school in physics and astrophysics.

On the 7th November, the RRI has a formal celebration of its Golden Jubilee, and will be attended by eminent scientists like Profs MGK Menon, S Dhawan and A Jayaraman. The

welcome address will be given by professor N Kumar, also the Director of RRI.

As you walk out of the Institute into the gray-toned world, you can almost feel the cosmic presence of Sir C V Raman. His spirit continues to motivate scientists, be it either to scale dizzying heights in search of astral bodies, or to delve into mystic depths of condensed matter physics.

Could this be a tiny part of the awesome 'Raman effect', bequeathed by him to all mankind?