

His aim is to attract students to science

By Harichandan A.A.

BANGALORE, JUNE 9. "You can't sit here twiddling your thumbs, complaining that no one is interested in science. You have to go out there and do what best you can do, and if it is worth, people will go for it." This was the message by Satish Dhavan, scientist, to his juniors.

One of his juniors, **Srinivasan Ganesan**, went on to become an astrophysicist at the Raman Research Institute (RRI). That he took his guru's words to heart became the good fortune of 40 young science enthusiasts from various colleges here who attended his weekend course in space science.

From the Indian Space Research Organisation's Satellite Centre here to the radar centre in Tirupati, and to the SHAR launch site in Shriharikota, the students had the time of their life.

Many of them said they were feeling and living with the excitement of science. "We were just one metre away from an INSAT satellite," said Pavan, who just finished his B.Sc. course in M.E.S College.

For their performance in the course, Pavan and his friends, Supriya, Udita, and Vishnu Kumar, got copies of a newly

published book, *Concepts in Space Science*, at a function where it was released. Many experts in physics attended the function held recently.

Prof. Srinivasan, who has been with the RRI for the past 26 years, conducted a weekend course in space science on the premises of St. Joseph's College last year. The response to it was overwhelming.

He said that as a scientist he always felt ashamed that with all these great research institutes in Bangalore little was being done to create a sense of excitement in science among the students of science from colleges affiliated to Bangalore University. So he met Nagaraj, Head of the Department of Physics in St. Joseph's College, and asked him if he could start a course for students. Prof. Nagaraj agreed to his request.

For the students, it was a chance not to be missed at a time when their college courses and teachers offered little excitement and everything was "examination oriented". "It was nothing like what we do in B.Sc. Prof. Srinivasan was inspiring in the way he made everything so simple for us," they said.

Through the course, the students got an overview of astrophysics, stars, stellar

evolution, death of stars, white dwarfs, neutron stars, black holes, galaxies, cosmology, and x-ray and gamma ray astronomy. Prof. Srinivasan's colleague at RRI, **Biman Nath**, held classes on cosmology.

During their visit to the ISRO Satellite Centre (ISAC), the students learnt about orbital dynamics, communication systems, design of satellites, and remote sensing and its applications.

They had a class in the same hall where Sir C.V. Raman taught.

They learnt about inter-stellar matter and dark matter.

At SHAR, they watched a film on ISRO. Then came classes on the rocket range, history of rocketry from 1232 A.D. when the Chinese used "flying arrows of fire", to Tipu Sultan's 3.8-metre rockets to Dr. Goddard, the father of modern rocketry, to Von Neuman, and the India's own GSLV.

The classes were comprehensive and touched upon the internal systems of rockets, the solid, cryo, and liquid phases. "We visited them just after ISRO had some tests on the indigenous cryo engines being developed. We had a chance to ask a lot of questions," the students said.

At the MST Radar Centre in Tirupati, they were introduced to atmospheric research followed by a crash course in "how the awesome 22 rows by 22 columns of antennas work", their placing, diffraction, polarisation, etc. After their return, there were discussions on everything they had seen and learnt, and they were asked to write a 10-page essay on any of the topic covered during the course. This year, the course will start in July, Application forms and details on the course may be had from St. Joseph's College from June 15.