

IIT-I to develop our third radio telescope

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INDORE: By setting up India's third radio telescope here in the state, the Indian Institute of Technology Indore (IIT-I) would now also contribute in the field of radio astronomy.

The telescope RTAC- Radio Telescope Array for Cosmology- designed and being built by IIT-I would be small in size, making it mobile and first-of-its-kind

in the country.

The IIT-I plans to develop a technology that will eventually be better than those used in Australia and the United States. The institute aims to achieve this goal by working in collaboration with scientists from both the countries, said Dr Siddharth Savyasachi Malu, principal investigator of the project. Malu was hired earlier this year, specifically to start astrophysics research in IIT-I. He is also

involved in two other key NASA projects.

Interestingly, on the lines of United States, IIT-I would also keep its gates open for the general public interested in astrophysics, to help in analysing the data.

IIT-I plans to set up the telescope at Ralamandal or Vindhyaachal - the hilly area - which would act as a natural barrier to help avoiding any kind

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■ Illustration of the kind of images that the telescope would help in generating. (Image courtesy: NASA)

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of interference from mobile towers, which might otherwise affect the observations.

Dr Malu said, "The engineers would soon start their survey in these areas to locate the best possible place which has lowest radio frequency interference."

After commissioning the radio telescope, the institute further plans to set up another five such telescopes with the cost of Rs 2 crore. These telescopes will together help in covering more area and probe smaller regions

of the sky through astronomical interferometry.

The main research to be conducted by this telescope is concentrated on cosmology—to find what happens after hot gas masses in clusters of galaxies collide with each other. The telescope will also help to study the clusters and super clusters in the universe. Cosmology is the study of structure, origin and evolution of the universe. It is a branch of astrophysics which includes study of stars and galaxies, clusters of galaxies, and the overall struc-

ture, evolution and origins of the universe.

The RTAC telescope would be technologically advanced than the existing telescopes- Giant Metrewave Radio Telescope (GMRT) near Pune and Ooty Radio Telescope near Udhamgamandalam, operated by National Centre for Radio Astrophysics (NCRA). It would be a high- frequency high- precision telescope with frequency of 2GHz up to 18 GHz, higher than GMRT. Dr Malu said, "The higher you go on frequency, lower you

go in wavelength and the instrument gets more precise."

IIT-I director Pradeep Mathur facilitated the seed money to start on establishment of Radio Astronomy Laboratory which will build this telescope to begin with and will then work to place it and other telescopes at heights up to 5,000 m above sea level in the Himalayas.

Further by setting up a Centre of Excellence for Radio astronomy, the institute plans to train the school children- particularly from the villages- to help in dissemi-

nation of information amongst other students.

"We want to create a batch of enthusiastic young researchers by exposing the students to astrophysics at a young age. This way we would have more students who would be interested in this field," said Dr Malu.

ON VP POLL-EVE, SONIA CURRIES FAVOUR...

AIADMK tried to curry up support for their candidate Jaswant Singh. Odisha chief minister Naveen Patnaik-led BJD,

which supported PA Sangma for president, has decided to abstain in Tuesday's polls.

A senior UPA minister said Ansari would get the support of more than 500 MPs, including those from the Left, out of 790. Only 787 will vote as Pranab Mukherjee, Vijay Bahuguna, who resigned from the Lok Sabha after taking over as Uttarakhand chief minister, and BJP member from Bellary J Shanta who faces a court case, would not be able to do so. The result will be out Tuesday evening.