

## **Shortage of astronomers in India is acute**

By Dinesh C Sharma and P Sunderarajan

Jaipur, March 7 (India Science Wire): India produces a large number of engineers and doctors, but when it comes to astronomers the shortage is acute though the country has made its foray into international mega science projects like search for gravitational waves and the Thirty Metre Telescope.

A country of 1.2 billion people has just 500 to 700 professional astronomers who are engaged in research. "We need at least ten times this number in the years to come to handle all scientific work and data emanating from these mega science projects," Prof Sheo Kumar Pandey, President of Astronomical Society of India, said on the sidelines of annual session of the society here on Tuesday.

"It is good that there has been a profusion of big projects. It is highly welcome. But there is a major shortfall of manpower. The new opportunities would generate lot of data. These needs to be analysed and made use of," Prof Pandey added.

Exciting developments are taking place in the field of astronomy in India in recent times. India sent Astrosat, a satellite exclusively devoted to astronomical studies in September 2015. This has been followed by a decision to join an international effort to set up Thirty Meter Telescope (TMT) in the US and another to be part of the global LIGO project, which seeks to study the gravitational waves in the outer space.

The Thirty Meter Telescope (TMT) is slated to be the most advanced ground-based optical, near-infrared, and mid-infrared observatory in the world. It is an international partnership between CalTech, Universities of California, Canada, Japan, China and India.

In order to overcome shortage of astronomers and astrophysicists, physics departments in universities and colleges will have to step their output in astronomy. "We also need to develop data centres and a networks to handle and analyse data that be flowing from mega science projects," Prof Pandey said.

Dr G C Anupama, dean of faculty of sciences at the Indian Institute of Astrophysics, Bangalore said that engineers – civil, mechanical, electrical – capable of handling projects in astronomy were required, in addition to those trained in software and electronics.

While engaging in frontline research in astronomy such exploring early universe and evolution and formation of galaxies, Indian astronomers are also trying to reach out to children and general public about joys of astronomy. Prof Pandey said astronomy can help inculcate scientific temper among general public.

"Small observatories can be set up in schools and colleges. It would not cost much. Not more than a lakh or two per observatory. Children and the nearby communities could get exposed to the wonders of the sky and taught the basics of astronomy. This would go a long way in attracting youth to take up a career in astronomy."

He said : "It is possible to do that. We are in the midst of exciting developments. In 2015, Astrosat was launched and now we are preparing for Aditya. We are also now part of the global 30 metre telescope project and LIGO experiment. We must use this opportunity to take Indian contribution to world Astronomy to newer heights."(India Science Wire)