

“Sisters and brothers,

It is a great pleasure to be here, at this campus for Centre for Research and Education in Science and Technology of Indian Institute of Astrophysics, Bengaluru.

It is a matter of great pride that the Department of Science & Technology and also the Indian Institute of Astrophysics are celebrating 50 years of their service to the nation. Let me congratulate the institute for their continued contributions to knowledge creation for the common good of the society at large.

The Indian Institute of Astrophysics has a long history in pursuing astronomical research, and has contributed richly to scientific knowledge. Some of the major discoveries include the presence of element Helium in the Sun and rings around the planet Uranus. This Institute also operates a solar observatory in Kodaikanal which was part of Madras Observatory set-up in 1786. The Kodaikanal Solar Observatory maintains data of continuous observations of the Sun for about 120 years, a treasure trove of solar studies. IIA also operates the Indian Astronomical Observatory (IAO), Hanle, Ladakh, one of the highest altitude observatories in the world at about 4500-meter from the sea level.

Science is the foundation of any society as it deals with truths of verifiable facts through repeated experiments. Inculcating scientific temperament among the society is key for the progress of societies and sustaining humanity.

India's long tradition of Astronomy is well known to the world. India has made several notable contributions to the world of astronomy right through the ancient times to the modern era. Aryabhata of 5th Century CE is a well known mathematician and astronomer whose pioneering works include rotation of earth and motions of planets around the Sun etc.

Indian contributions in modern astronomy have been truly outstanding and long-lasting. For example, Meghnad Saha, a great astrophysicist is best known for formulating the well known Saha equation which made it possible to determine the temperature of various kinds of stars using spectral line intensities of different elements. This is one of the most fundamental works on which much of current stellar atmospheric studies stand. Another reputed astrophysicist is Subramanyan Chandrashekar whose works on stellar structure won him the Nobel Prize in 1988. To recognize and honour his contributions to astronomy and astrophysics, NASA named one of its most prestigious and multi-billion dollar space telescopes as Chandra X-ray Telescope.

It is an honour to remember pioneers like Prof. Vainu Bappu, father of modern optical and infrared astronomy in the country who was responsible for building the indigenous 2.3 meter telescope which was one of the largest in the world at that time and the largest in Asia. India recently commissioned a 3.6 meter Devasthal Optical Telescope in 2015, which, at present, is the largest optical telescope in the country.

However, the astronomy community elsewhere have access to 10 meter class telescopes for more than 20 years now, and are planning to build next generation observatories. These require huge financial and human resources necessitating international partnerships. In 2014 the Cabinet, Chaired by the Prime Minister Shri Narendra Modi approved India joining Japan, China, Canada and USA to build a Thirty Meter Telescope in Hawaii, USA. It gives me great pleasure to inaugurate the facility that will fabricate optics for realization of this international endeavor.

Participation in such mega scientific projects provides a level playing field for Indian scientists and help to industries build capacity in high technology field.

India is moving up in the technology front very rapidly. The much talked about ISRO space mission “Mangalyan” and India’s astronomy observatory “ASTROSAT (astronomy satellite) for surveying the sky in X-ray and UV, and the soon to be launched Aditya L1, a solar study mission, are a few examples. The Aditya mission which will be placed in space nearly 15 lakh kilometers from the Earth will enable unprecedented close look of our star, the Sun.

The environmental test facility that is inaugurated today is a facility to space qualify small payloads. This will be opened for use by universities and industry to develop small space payloads. These facilities will help the growth of space sector in the future.

India's foray in to such global and world class national scientific ventures seems natural, given its intellectual reserves and global stature as an emerging economic and political power. It is important to inculcate scientific thinking in the younger generation. Institutes like this should be able to provide a platform for innovations and technological advancements.

The participation by India in mega-science projects have given the science community a unique opportunity to stand shoulder to shoulder with other advanced nations in the planning and construction of these complex projects. These have also brought the ambitious science experiments and industry together. This is already benefiting the country in capacity building and technology transfer.

Dear friends,

I always say that the ultimate aim of science is to make people's life comfortable and happier. And I am happy to say that astronomy has immensely benefitted the society in multiple ways. There is a vast amount of technology transfer that happens from astronomy to industrial, aerospace, and energy sectors. Many technologies that we take for granted today- x-ray machines, precision clocks, super computers, satellite communication, GPS- are all fruits of research done in astronomy.

Astronomical studies are also helping us understand the evolution and composition of Earth's atmosphere. This provides us vital insights into the factors relating to climate change and steps required to address the same.

Astronomy is also bringing people and nations together as seen in several international projects.

This universe is a mystery for man. Astronomy does not just expand the horizons of human knowledge, but makes us understand the vastness of the universe. When we see the picture of our Earth seen as a 'pale blue dot' from outer space, it makes us sit and think about our existence and purpose of life. It makes us feel humble.

What I saw today at this campus are some of the finest examples of our commitment to basic research and technology development for future generations, and will lay the foundation for an Atmanirbhar Bharat.

I hear from the Director that there is a plan to expand this campus to have a science center for spreading awareness of science and curiosity among children and the general public. I think that will be an important step for reaching out to the public and spreading scientific awareness.

Finally, let me congratulate the scientists and engineers for their incredible work in developing these major scientific facilities for the future generations, and also the Department of Science and Technology, Department of Atomic Energy and ISRO for providing visionary leadership.

I wish all the IIA fraternity a very happy new year.

Jai Hind!"

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