THE NIGHT SKY AND ITS MYSTERIES

An Outreach Programme by IMSC

On the fourth of January 2019 The Institute of Mathematical Sciences (IMSC) was buzzing with excitement, as school students from across the city came together to commemorate the 125th anniversary of Mr. M.N.Saha a famous astrophysicist through an outreach programme on astrophysics.

Hurudaya, Siddarth of std IX, Shruthi, Sahana and Sarvajit of std. XI accompanied by Ms. Adithi attended the programme where they were treated to three lecturers delivered by eminent professors Mr. Patrick Das Gupta and Mr. Vishal Gajjar.

Mr. Patrick Das Gupta, set the ball rolling by unveiling the mysteries of the night sky in a fascinating presentation, with the dim lighting. The breath taking pictures of heavenly bodies and the awe-struck silence making it seem like an actual walk through the stars! From the geometry of the night sky, to ways of measuring the distance of the stars, to the chemistry of black holes he effortlessly blended the sciences to present a thorough study of the universe around us. He also offered an insight into the famous Olber's paradox, the phenomenon due to which the night sky remains dark despite the presence of billions of stars.

The next phase of the programme involved a detailed account of quantum mechanics and atomic spectra, and the work of Mr.Saha in the same. His equation, the "photoionization equation" revolved around the spectra of stars and the temperature of these heavenly bodies. To help students understand the real life applications of the Saha equation, a hands-on experiment was conducted, where the students transformed a CD and sheet of paper into a sophisticated spectroscope.

The final and the most awaited lecture dealt with one of the fundamental questions that humanity has- "Are We Alone in the Universe?" Professor Vishal Gajjar from Berkeley delivered a concise, yet captivating lecture on the attempts being made to detect and locate extra-terrestrial life. He described the use of radio waves and radio telescopes, such as the Green Bank telescope and the Parkes telescope in the same. He also mentioned the Kepler series of planets and the conditions required for life to thrive in any of these planets.

"The programme has achieved its aim of inspiring the students to pursue their interest in science and keeping Mr. Saha's legacy alive." Said Mr. Patrick Das Gupta as the programme concluded on a bright note, with the students bubbling with curiosity and enthusiasm regarding the fascinating world of astrophysics!

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