



भारतीय खगोलभौतिकी संस्थान
INDIAN INSTITUTE OF ASTROPHYSICS
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स्नातक अध्ययन मंडल **Board of Graduate Studies.**

IIA - CU - PhD (Tech) Seminar.

Speaker: Mr. Bharat Chandra P

शीर्षक Title: Development of UV Instrument to Study Nebular Lines

सार Abstract

One of the most exciting parts of the astrophysical spectrum is the near-ultraviolet (NUV: 1400 – 2700Å), where there are several important atomic and molecular lines. We built a payload called the Spectroscopic Investigation of Nebular Gas (SING) to map spectral features over nebular regions such as supernova remnants, planetary nebulae, and star-forming regions. SING is designed to operate as a scanning sky mission from a Low Earth Orbit platform. It has a unique combination of spectral and spatial resolution, sensitivity to investigate diffuse sources, and a mission lifetime required to probe the physics of nebulae or the ISM. As the payload orbits the earth, the resulting survey using the spectrograph will create a map of the sky covered within the field of view (FOV) of the payload constrained by the orbital inclination of the spacecraft. The payload contains optics for the NUV spectrograph, an MCP-based detector, and other required electronic components. We have also built a star sensor prototype called StarberrySense to support astronomy missions. The sensor will provide pointing information, which is crucial for astronomical observations from space. The sensor was built, qualified, and flown on the PSLV-C55 Experimental module to determine its performance and survivability in space.

बुधवार Wednesday 25, फरवरी February 2026

Venue: प्रेक्षागृह Auditorium

Time: 11:30 AM

सभी का स्वागत है All are welcome.