S N BOSE NATIONAL CENTRE
FOR BASIC SCIENCES
Block JD, Sector III, Salt Lake, Kolkata 700 106

DEPARTMENTAL SEMINAR

Department of Astrophysics and High Energy Physics

28th September, 2026 **3.00 pm** **FERMION**

SPEAKER

Dr. Chayan Mondal,
Assistant Professor, SNBNCBS

TITLE OF THE TALK

A Decade of AstroSat: Unveiling the Ultraviolet Universe with UVIT

ABSTRACT

AstroSat, India's first dedicated multi-wavelength astronomical space observatory, was launched in September 2015 to explore the Universe simultaneously across the ultraviolet, optical, and X-ray bands. Among its five scientific payloads, the Ultra-Violet Imaging Telescope (UVIT) has made significant contributions to the study of the ultraviolet Universe, providing high-resolution imaging in the far- and near-ultraviolet bands over a wide field of view. As AstroSat completes 11 years in orbit, this talk will review the scientific advances enabled by UVIT, with particular emphasis on how ultraviolet observations have addressed key questions in stellar and galaxy evolution. I will discuss UVIT studies of massive and young stellar populations, stellar populations in open and globular clusters, star-formation activity and dust attenuation in nearby and distant galaxies, and the interplay between nuclear activity and star formation in AGN host galaxies. I will also highlight recent UVIT results on detecting Lyman-continuum photons from distant galaxies and their implications for understanding the sources responsible for cosmic reionization. Finally, I will discuss the scientific legacy of AstroSat/UVIT and its continuing role in advancing ultraviolet astronomy and fostering UV-based research in India.

HOST FACULTY

Dr. Tapas Baug, Associate Professor
Dept. of ASTROPHYSICS AND HIGH ENERGY PHYSICS

****