भारतीय खगोलभौतिकी संस्थान
INDIAN INSTITUTE OF ASTROPHYSICS
कोरमंगला **Koramangala,** बेंगलूरु **Bengaluru – 560034.**

स्नातक अध्ययन मंडल Board of Graduate Studies.

STUDENT SEMINAR
(Part of Comprehensive Examination)

Speaker: Mr. Abhisheka Patro

Title: Wing Formation in X-Shaped Radio Galaxies

सार Abstract

X-shaped radio galaxies (XRGs) are a distinctive class of radio galaxies characterized by two pairs of extended radio lobes oriented along different axes. While the primary lobes are associated with two nearly antiparallel jets, the origin of the fainter, diffuse, and misaligned secondary lobes, known as wings, remains an open question. The central argument of this talk is that understanding wing formation requires evaluating competing physical mechanisms against the observed morphology and properties of X-shaped radio galaxies, rather than attributing their formation to a single universal process. Proposed explanations include the diversion of backflowing plasma, changes in jet orientation, and interactions between radio plasma and the surrounding galactic environment. I will discuss these mechanisms, the physical processes underlying them, and the observational evidence and challenges involved in distinguishing between different models.

बुधवार Wednesday 28, अक्तूबर October 2026

Venue: प्रेक्षागृह Auditorium

Time: 11:30 AM

सभी का स्वागत है All are welcome.