



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

STUDENT SEMINAR
(Part of Comprehensive Examination)

Speaker: Mr. Ankit Patel

Title: The Role of Active Galactic Nuclei in Galaxy Evolution

सार Abstract

Almost every galaxy in the Universe hosts a supermassive black hole (BH). When such black holes accrete matter from their surroundings, they radiate across the entire electromagnetic spectrum, and those systems are classified as active galactic nuclei (AGNs). Apart from their radiative output, AGNs also inject energy and momentum into their surroundings. Winds and jets launched from the nucleus carry kinetic energy into the host galaxy's interstellar medium (ISM). This energy is sufficient to heat, disperse, and possibly unbind dense gas, thereby suppressing star formation across the galaxy through a mechanism known as AGN feedback. Together with feeding and feedback, a central BH can regulate galaxy growth and evolution of its host on scales far beyond its own gravitational sphere of influence, however, both processes remain poorly understood. I will discuss our efforts to address this gap using optical/near-infrared 3D-IFU and X-ray data to trace the multi-phase gas flows.

बुधवार Wednesday 07, अक्टूबर October 2026

Venue: प्रेक्षागृह Auditorium

Time: 11:30 AM

सभी का स्वागत है All are welcome.