



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

स्नातक अध्ययन मंडल **Board of Graduate Studies.**

Visiting Student's Programme Seminar

Speaker: Ms Lasin M. S
(MSc JMI Central University)

शीर्षक Title: Exploring Giant Stars with Unknown Luminosity Classes.

सार Abstract

The activity of giant stars is less studied due to challenges in behavior and observational limitations, but space missions like TESS and Kepler have addressed many of these issues with high-precision, continuous monitoring. Stellar flares, linked to magnetic activity, are studied using light curves, though oscillations often mimic flares, complicating analysis. While algorithms exist to detect flares in dwarfs and giants, many fail to account for low-energy flares, oscillations, binarity, and instrumental errors. Combining automated detection with visual inspection is more reliable. This study builds on K. Oláh's (2021) findings, analyzing a sample of 14 stars, including outliers and those with undetermined luminosity classes. Isochrone fitting is used to determine stellar parameters from theoretical models, but is prone to errors due to its sensitivity to input parameters. The talk will include automated flare detection and their problems followed by the analysis of flare parameters. Additionally, the interplay between position and metallicity will be examined. Different isochrone fitting models will be discussed as well. The talk will include the flare frequency distribution analysis. Further, efforts to gather insights into stars with unknown luminosity classes will be outlined.

मंगलवार Tuesday 26, नवंबर November 2024

Time: 02:30 PM

Venue: प्रेक्षागृह Auditorium

सभी का स्वागत है All are welcome