



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

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

STUDENT SEMINAR
(Part of Comprehensive Examination)

Speaker: Ms. Parvathy M

शीर्षक Title: Exploring the Sun and Planets in the Framework of Exoplanetary Systems

सार Abstract

Since the discovery of the first exoplanet in 1995, the field of exoplanet research has been rapidly growing, with current major efforts focused on understanding spectral signatures of exoplanet atmospheres, star-planet and exoplanet-exomoon interactions, and habitability. With limited observations due to the sensitivity of the current observing facilities and the need for complex theoretical modeling, we propose to take some insights from observations of the Sun and solar system planets. Such observations can be used to model and further our understanding of exoplanetary systems. This work aims to study the Sun and the other solar system planets in the context of exoplanets.

In the first part of the talk, we will discuss a simulation that explores the feasibility of detecting exo-Saturn rings using the line geometry of the reflected host star spectra at high resolution. The second part focuses on the instrumentation modifications that have to be done at the VBT prime focus to enable it to observe the solar system planets as point sources. In the last part, we discuss the characterization of magnetic activity on the solar surface (which can be a major source of noise and confusion in the calculations of RV measurements and spectral indices of exoplanets) using sun-as-a-star spectra from HARPS-N.

मंगलवार Tuesday 29, अक्टूबर October 2024

Time: 11:00 AM

Venue: प्रेक्षागृह Auditorium

सभी का स्वागत है All are welcome.