भौतिक अनुसंधान प्रयोगशाला, अहमदाबाद

Physical Research Laboratory, Ahmedabad

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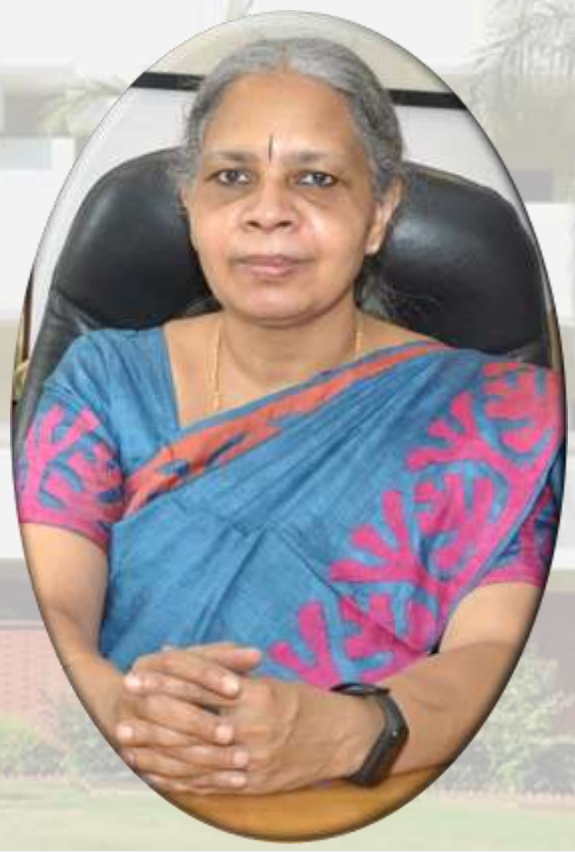
PRL Ka Amrut Vyakhyaan-31

Wednesday, 02 March 2022

@ 04:00 PM (IST)

"Ultra-violet Imaging Telescope and beyond"



Dr. Annapurni Subramaniam

Director,

Indian Institute of Astrophysics, Bangalore.

YouTube https://youtu.be/uE7humVtRXY

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PRL ka Amrut Vyakhyaan-31

Title: "Ultra-violet Imaging Telescope and beyond "

Speaker: Dr. Annapurni Subramaniam

Director,

Indian Institute of Astrophysics, Bangalore.

On Wednesday, 16 February 2022

Abstract

The Ultra-violet imaging Telescope (UVIT) is one of the instruments on the first Indian space observatory, AstroSat. In this talk the salient features of UVIT and some recent science results from it will be presented. This talk will also discuss the next-generation UV-optical space mission, INSIST, that is in the planning.

The Speaker

Dr. Annapurni Subramaniam is the Director of the Indian Institute of Astrophysics, Bangalore. Her research interests include Star clusters, Classical Be stars, Young stellar Objects, Blue straggler stars, Magellanic Clouds, nearby galaxies, UV astronomy. She is the calibration scientist for the UV Imaging Telescope (UVIT) onboard India's first space observatory, ASTROSAT. She was heading the Indian team of the Observatory software completed the delivery of Common software in 2019 for the Thirty Meter Telescope (TMT), which is being built by an international consortium with India as a partner. She continues to play an important role in the project as the director of the Institute that leads the project from India.

She is the Principal Investigator of the proposed next-generation UV-Optical space telescope (INSIST), leveraging on the experience gained from AstroSat and UVIT. She has about three decades of research experience and has published about 150 publications on star clusters, stellar populations, galaxies, and ultra-violet astronomy. She has guided a number of students, and ten are awarded Ph.D. She is currently the Chief Editor of the Journal of Astrophysics and Astronomy, jointly published by the Indian Academy of Sciences and Astronomical Society of India. She is also a scientific editor of Research in Astronomy and Astrophysics, published by the Chinese Academy of Sciences. She is the Chair of the membership committee of the International Astronomical Union at the international level. She has received many awards and fellowships some them are, Fellow of Indian Academy of Sciences (since 2014), Fellow of the National Academy of Sciences (since 2013), Life member of International Astronomical Union and Astronomical Society of India, Kavli Frontiers of Science Alumni, instituted by Kavli foundation and National Academy of Sciences, USA, Recipient of C.V. Raman Young scientist award for physical sciences, from the Karnataka Government for the year 2018. She is a recipient of the SERB-POWER fellowship (2021) and NASI-BUTI foundation lecture award (2021).

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About PRL

The Physical Research Laboratory (PRL), known as the “cradle of space science” in India, is one of the premier research institutes founded in 1947 by Prof. Vikram Sarabhai, a renowned Cosmic Ray Scientist, a great visionary and institution builder. PRL played a seminal role in producing a highly motivated cadre of space scientists and the technologists of highest international repute. The first scientific rocket launched from Thumba on 21st November-1963 and many other rockets launched thereafter contained payloads developed at PRL. Dr. Sarabhai initiated many of these scientific and technical activities at PRL which eventually led to the formation of the Indian Space Research Organization (ISRO). Therefore, PRL is known as the “cradle of space science” in India. Further, the research in the area of Plasma Physics expanded to the formation of the Institute of Plasma Research (IPR).

As an institution PRL is unique in that it conducts fundamental research in a wide range of research areas from the Earth to the cosmos, and comprising Astronomy and Astrophysics; Solar Physics; Space and Atmospheric Sciences; Theoretical Physics; Geosciences; Atomic, Molecular and Optical Physics, Astrochemistry; and Planetary Sciences and Space Exploration. PRL is one of the rare research institutes of international repute wherein research in such diverse fields of sciences is carried out using several state-of-the-art experimental facilities that exist under one umbrella.

Along with the ongoing research, several new initiatives have been taken up during the last few years. The Multi-Application Solar Telescope (MAST) at Udaipur Solar Observatory has been operationalized. PRL initiated scientific programmes in frontier areas of research, which include a search for exo-planets, laboratory studies of interstellar grains, laboratory synthesis of cold astromolecules and experimental studies in the field of quantum optics. PRL is also developing several scientific payloads as a part of ISRO’s larger vision and contributing to roadmap for competitive scientific exploration of the solar system and beyond. In particular, PRL has been contributing significantly not only in building instruments for space missions, such as Chandrayaan-1, Chandrayaan-2, AstroSat and upcoming Aditya-L1, Chandrayaan-3 and planetary and space missions, but also by bringing out new and insightful science results.

PRL contributes to several national and international research programmes and to human resource development through its Doctoral and Post-Doctoral Programmes, capacity building programmes, such as UN Course on Space Science, and science and engineering internship programmes. PRL contributes significantly to society through its Outreach Programmes by periodically organizing science exhibitions and Open Houses, planned visits of students of various school and college to PRL, and popular talks at various institutions to not only share the excitements of the advancements of contemporary scientific findings but also to encourage students to take up sciences as their research career.

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