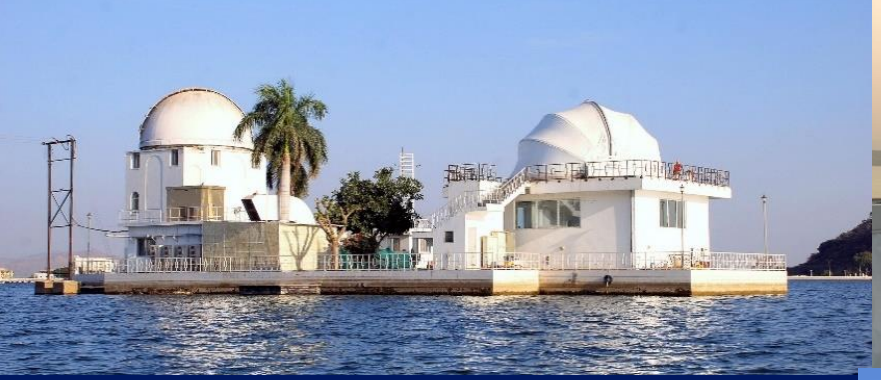
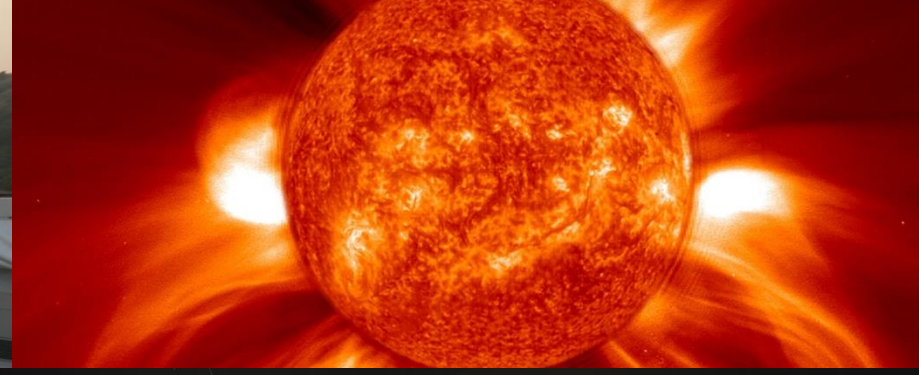




ONLINE CSSTEAP SHORT COURSE

ON

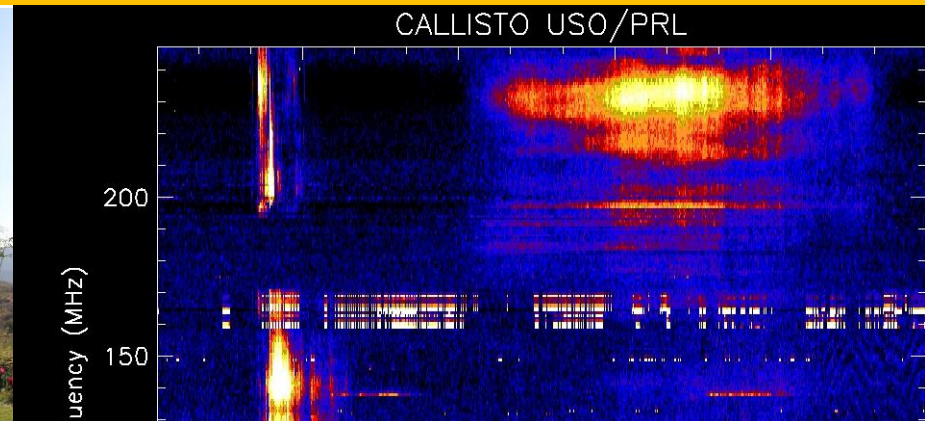
"SOLAR PHYSICS"

Organized By **Conducted By**

May 22 – 26, 2023

Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP)
(Affiliated to the United Nations)
IIRS Campus, 4, Kalidas Road, Dehradun, India
www.cssteap.org

Physical Research Laboratory (PRL)
(A Unit of Dept. of Space, Govt. of India)
Navrangpura, Ahmedabad, India
www.prl.res.in



INTRODUCTION

The Sun not only supports life on Earth but it is also responsible for a host of phenomena in the interplanetary space. To understand these phenomena, it is necessary to explore the physics of the Sun from its core to its atmosphere. Importantly, the solar plasma exhibits a complex and dynamic behaviour in the form of sunspots, flares, coronal mass ejections, plasma jets, the 11-year solar cycle, coronal loops etc. and is primarily due to the continuously changing solar magnetic field. The Udaipur Solar Observatory (USO) of the Physical Research Laboratory (PRL) uses multi-wavelength observation, numerical modelling, and theoretical/computational research to study the dynamics of the Sun thoroughly. A suite of telescopes including the Multi-Application-Solar Telescope (MAST), GONG (Global Oscillation Network Group) telescope, along with a radio spectrograph (CALLISTO) is employed. These ground-based observations are further augmented with data from various space-based observatories. The 100 TF supercomputer, Vikram-100 of PRL, is utilized to perform the computationally intensive numerical simulations.

ABOUT CSSTEAP

The CSSTEAP was established in India in November 1995 with its headquarters in Dehradun and is considered as the Centre of Excellence by UNOOSA. The 1st campus of the Centre was established in Dehradun, India and is hosted by Indian Institute of Remote Sensing (IIRS), a constituent unit of Indian Space Research Organisation (ISRO). The CSSTEAP has been imparting training and educational programmes related to RS & GIS, Satellite Communication, Satellite Meteorology, Space Science, Global Navigation Satellite Systems, and Small Satellite Mission, helping participants in developing research skills through its Master Degree, Post Graduate and Certificate programmes.

ABOUT PRL

Known as the cradle of Space Sciences in India, the Physical Research Laboratory (PRL) was founded in 1947 by Dr. Vikram Sarabhai. As a unit of the Department of Space, Government of India, PRL carries out fundamental research in selected areas of Physics, Space & Atmospheric Sciences, Astronomy &Astrophysics, Solar Physics, Planetary and Geosciences.

OBJECTIVE OF THE COURSE

The objective of the course is to create an understanding of the basics and current research trends in the field of Solar Physics. The course aims to raise awareness about solar physics among highly motivated students who aspire for a career in scientific research and technology. It will also benefit professionals working in areas of atmospheric science, space physics, satellite systems, satellite communication and navigation.

COURSE CONTENTS

1. Overview of Solar Physics
2. Sunspots and solar active regions, solar cycle, solar dynamo theory
3. Solar magneto-hydrodynamics
4. Solar eruptions: flares and coronal mass ejection
5. Solar wind observations and theory
6. Space Weather, the Sun-Earth connection
7. Solar observations and online experiments
8. Current trends in Solar Physics

ELIGIBILITY AND HOW TO APPLY

Applicants should have a Master's degree in Physics/Astronomy/Astrophysics/Solar Physics/Meteorology or other equivalent qualification relevant to Space Science, OR Bachelor's degree in Engineering, (B.E./ B. Tech.) in Electronics and allied fields / Environmental Science/Engineering. Applicants having teaching or research experience would be preferred. Since the whole course will be conducted in English, the applicant should have proficiency in English language.

Applicants are requested to register online by opening the admissions portal at **www.cssteap.org** or **https:/admissions.cssteap.org/login** . They are advised to read each and every instruction given in the online application form carefully before applying online. The application should be duly forwarded by the Head of the applicant's institute for consideration. There is no course fee for applicants applying through proper channel.

Last date for receipt of application : April 30, 2023

Link for lectures will be shared with selected applicants in due course. Applicants are advised to check the website/portal **www.cssteap.org** regularly for further updates/information.

CONTACT DETAIL

For any course related query, the applicants may contact

Dr. Jay Banerji

Course Director

Physical Research Laboratory

Navrangpura, Ahmedabad 380 009, India

Email: uncsc@prl.res.in

Ph: +91-79-2631-4762, Fax: +91-79-2631-4900