



Physical Research Laboratory, Ahmedabad

COLLOQUIUM - 13 – 26

Speaker: Dr. Bhuwan Joshi
Udaipur Solar Observatory, PRL, Udaipur.

Title: Signatures of magnetic reconnection in solar flares: A multi-wavelength perspective

Abstract

Solar flares are characterized by the sudden release of excess energy stored in the magnetic fields of solar corona. The modern multi-wavelength observations have immensely improved our understanding of the various physical processes occurring in different atmospheric layers of the Sun during a solar flare. The standard flare model has been successful in broadly recognizing these physical processes as the consequence of large-scale magnetic reconnection in the corona.

The objective of the present talk is to summarize the multi-wavelength observations of solar flares taken mainly from the space borne instruments over the last two decades. I will particularly highlight the new results obtained from the RHESSI mission on the X-ray emission from the coronal loops. I will further compare these new observations with present theoretical interpretations in order to discuss the scopes and challenges for future investigations.

The Speaker

Dr. Bhuwan Joshi completed his M.Sc. (2000) in Physics from Nainital Campus of Kumaun University, Uttarakhand. He joined Aryabhata Research Institute of Observational Sciences (ARIES), Nainital as a Research Fellow in 2001 and obtained Ph.D. (2007) from Kumaun University. Dr. Joshi's thesis work involved investigations of solar flares associated activities from near-Sun region to interplanetary medium utilizing multi-wavelength measurements obtained from ground and space borne platforms. Dr. Joshi subsequently moved to Korea Astronomy and Space Science Institute, South Korea as a Post Doctoral Fellow (2007-2008) where he worked on contemporary X-ray observations of solar flares. He has special interest toward exploring the high energy processes that occur in coronal loops during the explosive energy release utilizing the hard X-ray imaging and spectroscopic measurements taken with unprecedented resolutions from NASA's RHESSI satellite. Apart from solar eruptions, he is also interested in the studies pertaining to temporal and spatial evolution of solar cycles. Dr. Joshi joined PRL/USO as a faculty member in 2008. He is a life member of Astronomical Society of India.

Wednesday: 25 September, 2013, 16:00 hrs

K.R. Ramanathan Auditorium, PRL

Tea at 15:30 hrs

ALL ARE WELCOME