



Physical Research Laboratory, Ahmedabad

Colloquium 17-02

- Speaker:** Dr. Arvind Singh Rajpurohit
Astronomy & Astrophysics Division, PRL, Ahmedabad.
- Title:** “The Fundamental Parameters of Very Low Mass Stars”
- Time:** Wednesday, 18 January 2017, 16.00 hrs.
- Venue:** K. R. Ramanathan Auditorium, PRL

Abstract

Very Low-Mass stars (M dwarfs) are an important source of information for probing the low mass end of the main sequence, down to the hydrogen burning limit. They are the dominant stellar component of the Galaxy and make up the majority of baryonic matter in the Galaxy. Moreover, an increasing number of M dwarfs are now known to host exoplanets, including super-Earth exoplanets. The determination of accurate fundamental parameters for M dwarfs has therefore relevant implications for both stellar and Galactic astronomy as well as planetology. Despite their large number in the Galaxy, M dwarfs remain elusive objects and the modelling of their photosphere has long remained a challenge (molecular opacities, dust cloud formation). The description of these stars therefore need a strong empirical basis, or validation. This talk will focus on various method and their shortcomings in determining the fundamental stellar parameters of these Very Low-Mass stars (M dwarfs) and to test recent model atmospheres.

The Speaker

Dr. Arvind Singh Rajpurohit completed his MSc (2007) from M.S.University of Baroda, Vadodara in applied Physics and obtained Ph. D. (2013) in Physics from Observatoire de Besançon, France. He then worked as a postdoctoral fellow, CNRS Fellow and French Space Agency Research Fellow (CNES) at Laboratoire de Astrophysique de Marseille (LAM). His areas of current research interest are as Atmospheric properties of Very Low Mass Stars, Brown Dwarfs and Extra Solar planets. He has several national and international publications to his credit.

Tea at 15:30 hrs.

ALL ARE WELCOME

