

Astronomy & Astrophysics Division Seminar

Title : Long term X-ray variability of Be/X-ray binaries : a case study of EXO 2030+37

Speaker : Mr. Sandeep Rout (PRL, Ahmedabad)

Date : 06.07.2018 (Tuesday)

Time : 11:30 Hrs

Venue : Seminar Room # 113/114 (Thaltej Campus)

Abstract:

Most Low mass X-ray binaries (LMXBs) show a transient behavior wherein they spend most of their life in quiescence and occasionally undergo outbursts due to instability in the accretion disk. These sources pose a unique opportunity to study the properties of the entire accretion disk especially of the relatively cool outer disk as the contribution of the companion star is negligible. One such soft X-ray transient GRS 1716-249 had been in an outburst during December 2016 and was observed in optical and infrared bands from Mt Abu Infrared Observatory. Towards the end of the outburst period, it was also observed by AstroSat as a ToO source. Combining the data obtained from Optical/IR and X-rays (3.0 - 100 keV) a multiwavelength analysis is attempted which promises to provide better constraints on black hole mass, disk outer radius etc. and help in expanding our understanding of various energetic processes occurring at the disk. In the seminar, I will discuss the general theory of accretion disks followed by the work carried on so far on the above object..
