ICTS Postdoc/Graduate Student Seminar Series

Title : Multi-wavelength study of X-ray reprocessing in Low Mass X-ray Binaries

Speaker : Gayathri Raman, ICTS-TIFR, Bangalore

Date : Friday, December 22, 2017

Time : 11:15 AM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Neutron Star Low Mass X-ray Binary systems (NS - LMXBs) consist of a NS accreting matter from a low mass companion star. Primary X-ray photons which are emitted from the NS surface or the inner accretion disk, irradiate various components of the binary, get absorbed and are eventually re-emitted at UV/optical wavelengths. Since these point source systems are not resolvable even using telescopes with the highest angular resolution, X-ray to UV/optical reprocessing becomes a useful tool that can be used to explore such systems. Results of detailed studies of X-ray to optical reprocessing in several individual LMXBs using X-ray and optical data obtained from a number of space-based X-ray telescopes and ground-based optical telescopes will be presented. I will also briefly discuss the future prospects with regard to timing studies of accreting neutron stars using the Indian multi-wavelength observatory, Astrosat, in the context of the reprocessing phenomenon and also binary parameter estimation for potential Gravitational Wave emission sources.

Note: This will be an ongoing biweekly seminar series (Fridays, 11:15 am) by the ICTS postdocs and graduate students