

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

DEPARTMENT OF ASTRONOMY & ASTROPHYSICS

ASTRONOMY SEMINAR

March 3, 2010

Speaker : Arunava Mukherjee
DAA-TIFR

Title : Study of X-ray timing and continuum spectra
of a neutron star low mass X-ray binary

Day, Date & Time : Tuesday, 9 March, 2010 14.30 hrs

Venue : Lecture Theater (AG69)

(J.S. Yadav)

Abstract

I will discuss our recent study of the X-ray timing and spectral properties of a neutron-star low mass X-ray binary XB 1254-690 using Rossi X-ray Timing Explorer data. Among various things, I will mention the low-frequency quasi-periodic oscillations (QPOs), found from this source for the first time; the colour-colour diagram (CCD) and hardness-intensity diagram (HID), which indicate the source states; and thermonuclear bursts, flares and dips. Moreover, I will also report on the first systematic X-ray continuum spectral study of XB 1254-690, and the corresponding interpretation. Finally, I plan to talk briefly about my future plans.