ASTRONOMY SEMINAR

August 25, 2011

Speaker	:	Varun Bhalerao Calteh, USA
Title	:	NuSTAR: Unveiling the Hard X-ray Universe
Day, Date & Time	:	September 6, 2011 (Tuesday) at 1600 hrs
Venue	:	Lecture Theatre (AG-66)

(A. Gopakumar)

Abstract

The Nuclear Spectroscopic Telescope Array (NuSTAR) mission will carry the first focusing Hard X-ray (6-80 keV) telescope into orbit in Feb 2012. Using grazing incidence optics and pixelated CdZnTe detectors, it will offer two orders of magnitude increase in sensitivity and an order of magnitude improvement in angular resolution over any previous instrument working in this energy range.

The two-year primary science mission focuses on four key programs: studying the cosmic evolution of black holes, understanding the populations of compact objects and the nature of the central black hole in the Milky Way, constraining the explosion dynamics and nucleosynthesis in supernovae, and probing the nature of particle acceleration in active galactic nuclei. A number of additional observations will be included in the primary mission, and a guest observer program will be proposed for an extended mission to expand the range of scientific targets.

I will talk about the instrument capabilities of NuSTAR and discuss the science programs.