

Institute Colloquium



by

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Title : **A low energy probe of Nature's building blocks : Neutrino Novelties**

Day & Date: Thursday, March 18, 2010

Time: 4.00 p.m.

Venue: PC Saxena Auditorium

All are Invited

Abstract: *A low energy probe of Nature's building blocks: Neutrino Novelties*

The standard path to improve our knowledge of the fundamental particles is to use high energy accelerators -- higher the energy, finer is the probing. Recently neutrinos have provided an alternate route. This is what we discuss.

Neutrinos are ubiquitous. They are produced in the atmosphere by cosmic rays, by the sun, by supernova explosions, and in radioactivity. They pass through our body in trillions every second without affecting anything. Detecting them and exploring their properties is a challenging task. In the recent past experiments looking for neutrinos from the sun and from the atmosphere have posed riddles whose solutions require modifications of the Standard Model of particle physics.

After sharing some of these excitements with you, I would like to end with a brief introduction to the India-based Neutrino Observatory which will put India in the big league of neutrino experiments.