



Extreme Light

Intense, ultrashort optical pulses provide ultrahigh intensities, known as 'extreme light'. Such light has revolutionized physics in the last two decades. On the one hand it provides a platform for testing models for matter that has been pushed to extreme conditions of high temperature coupled with high density. On the other hand, it is throwing up new phenomena at regular intervals - some of these include self-channeling of pulses through long lengths in plasmas, pair production and light induced nuclear physics (all at 1 eV of photon energy!) As intense laser-plasma interactions began to be explored, they led to synthesis of ideas from different traditional disciplines. Today, the study of these interactions and their spin-offs unifies practitioners of research areas ranging from astrophysics to accelerator physics and condensed matter physics to biology. This talk will introduce the subject and then focus on the research in this area at TIFR. Prof. Ravindra Kumar will share some interesting insights into this exotic state of matter.

Tuesday, 10 August 2010 at 4.30 p.m.
Room PF-AG 114
Prefab, Annabhau Sathe Bhavan
University of Mumbai
Kalina Campus



Prof. Ravindra Kumar obtained his Ph.D. from IIT, Kanpur and has been with TIFR since 1992. His work has significant interdisciplinary flavour. He has received the S S Bhatnagar award for Physical Sciences in 2003 and the B.M. Birla Prize for Physics in 2000. He is a Fellow of the Indian Academy of Sciences and the Indian National Science Academy. He is a life member of the Indian Laser Association, the Indian Society of Atomic and Molecular Physics, the Plasma Science Society of India and a member of the Optical Society of America.

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