

# CENTRE *FOR* EXCELLENCE IN BASIC SCIENCES

Tuesday **COLLOQUIUM**

## Super Magnetic Storm: Hazard to Society

by Dr. G.S. Lakhina

Indian Institute of Geomagnetism

New Panvel, Navi Mumbai

**Tuesday, 26<sup>th</sup> October 2010 at 4.30 p.m.**

Seminar Room PF-AG 14

Pre-fabs, Near Annabhau Sathe Bhavan

University of Mumbai, Vidyanagari Campus

Kalina, Mumbai 400098

Magnetic storms are the most important component of space weather effects on Earth. Super-intense magnetic storms (defined here as those with  $Dst < -500$  nT, where  $Dst$  stands for the disturbance storm time index that measures the strength of the magnetic storm), although relatively rare, can be hazardous to technological systems in space as well on ground. Such storms can cause life-threatening power outages, satellite damage, communication failures and navigational problems. The data for such magnetic storms during the last 50 years is rather scarce. Research on historical geomagnetic storms can help to create a good database for intense and super-intense magnetic storms. The super-intense storm of September 1-2, 1859 is analyzed in the light of new knowledge of interplanetary and solar causes of storms gained from the space-age observations. The speaker will discuss the results in the context of some recent intense storms, and also the occurrence and probability of such super storms.

Talk open to all