



Physical Research Laboratory, Ahmedabad

COLLOQUIUM - 13 – 24

Speaker: Prof. Tapan Nayak
Scientist, VECC, Kolkata and Professor, Homi Bhabha National Institute,
Mumbai.

Title: Big Bang to Little Bang - Exploring the Quark-Gluon Plasma at RHIC
and LHC

Abstract

Under extreme conditions of temperature and/or energy density, normal hadronic matter goes through a phase transition to a new form of matter consisting of de-confined quark-gluon plasma (QGP). The QGP might have been the primordial matter, which filled the Universe until a few microseconds after the Big Bang. The formation of QGP and the nature of the phase transition have been explored at the Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory and the Large Hadron Collider (LHC) at CERN, by colliding heavy-ions at ultra-relativistic energies. Major findings will be summarized, particularly from STAR and ALICE experiments where the Indian groups have made major contributions.

The Speaker

Prof. Tapan Nayak did his Ph.D. (1990) from the Michigan State University, East Lansing, Michigan, USA. Subsequently he joined as post doctoral fellow at Nevis lab, Columbia University, New York, USA. He then moved to GSI, Darmstadt, Germany and CERN, Geneva as Guest Scientist before coming back to India. He joined VECC, Kolkata in 1997. He was also a Scientific Associate at CERN during 2005-2007. His field of research is the search and study of a new state of matter, called the Quark-Gluon Plasma (QGP) which existed in the first tens of microseconds after the birth of our Universe. At present he is involved in two major experiments dedicated for the QGP study: (1) the ALICE experiment at CERN and (2) the STAR experiment at Brookhaven National Laboratory, New York which has been taking data since the year 2000. Prof. Nayak is currently the Spokesperson and Coordinator of the India-ALICE Collaboration and member of the ALICE Management Board at CERN, Geneva. He is a Fellow of the Indian Academy of Sciences, Bangalore, India.

Wednesday: 11 September, 2013, 16:00 hrs

K.R. Ramanathan Auditorium, PRL

Tea at 15:30 hrs

ALL ARE WELCOME