

# Cosmic Rays And Cosmology

17 November 2014 at 5:00 P.M.

Venue : Dr. Homi Bhabha Auditorium, TIFR

By

**Prof. Sir Arnold Wolfendale, FRS**

Durham University, UK

## Dr. Homi Bhabha / IUPAP Award Lecture

### Abstract:

Cosmic rays are high energy particles propagating in the universe. The universe is also filled with microwave photons also known as cosmic microwave background which was left behind after the big bang. The inter-relation of cosmic rays with the subject of cosmology will be examined. The role of the origin of ultra-high energy cosmic rays and their interaction with the cosmic microwave background will be discussed. The possibility of the current cosmic microwave background map being 'spoiled' by cosmic ray interactions within the Halo of our own Galaxy will also be explored.

### About the speaker:

Prof. Sir Arnold Wolfendale, FRS is a distinguished scientist in Cosmic Ray Physics and Astronomy. He graduated with honours in Physics in the laboratory of Prof. P.M.S. Blackett, Nobel Laureate, and 'inherited' Blackett's love of India and its people. He was elected FRS in 1977 and was appointed by the Her Majesty the Queen of England as the "Astronomer Royal" in 1991. Sir Arnold was knighted in 1995.

One of his proudest research achievements was to discover the Cosmic Ray Neutrino, in collaboration with groups from India (led by Prof. M.G.K. Menon, FRS) and Japan (led by Prof. S. Miyake). The work was carried out in a very deep mine in the Kolar Gold Fields near Bangalore.

He is a winner of many awards from a number of institutions from around the world which are too numerous to be listed here. Sir Arnold is specially fond of honours bestowed on him in India which include being an Honorary Foreign Fellow of TIFR, and of Indian National Science Academy New Delhi, and the National Academy of Sciences, Allahabad. He is also the first winner of the Dr. Homi Bhabha Award instituted by TIFR and IUPAP.

