EXPERIMENTAL PHYSICS DIVISION SEMINAR

INSTITUTE OF HIGH ENERGY PHYSICS, CAS

The Photodetector and the Eye

Speaker: Prof. Bayarto Lubsandorzhiev (INR)

Host: Prof. Sen QIAN (IHEP)

Time: 10am Wed 17 May 2023

Location: 228 Multidisciplinary Building

Indico: indico.ihep.ac.cn/event/19685

Zoom ID: 8409 2040 259

Password: 123456

Abstract:

In fact, today photon detectors (or photodetectors) are omnipresent. Indeed, look around yourself and you will encounter with photon detectors everywhere and at any time of the day or night. Nature created a great variety of photon detectors for living creatures from primitive, simplest photosensors to the most sophisticated ones. Charles Darwin considered human eyes as a pinnacle of Evolution, but he did not know mantis shripm eye system yet! Photon detectors are «workhorses» of physics experiments starting from ancient observations and Galileo's telescope to nowadays neutrino telescopes, from the simplest detectors for street lights switching or car parking systems to the complex sophisticated CCD/CMOS cameras of astronomical telescopes (VLT, Hubble, Webb etc.), PET-cameras, etc. In this talk we will cover evolution ideas in photon detection, vacuum photomultipliers in particular, for physics experiments. Following Murray Gell-Mann's famous book, we will dare to show human mind endeavours in the developments of photon detectors «in the Simple and the Complex».

About the speaker:

AAAProf. Bayarto from Institute for Nuclear Research of the Russian Academy of Sciences in Moscow, Russia. His research field of interest is experimental physics covering neutrino physics, cosmic ray physics, ground-based gamma-astronomy, axion physics etc. His special interest is focused on the development of experimental techniques, photon detectors in particular. He has been participating in a number of experiments including the pioneering deep underwater neutrino telescope at Lake Baikal, the cosmic ray and gamma-astronomy experiment TAIGA, the GERDA neutrinoless double-beta decay experiment, the TA experiment, the JUNO experiment, the LEGEND experiment, the IAXO experiment etc.