



Project: India-based Neutrino Observatory (INO)

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Probing neutrinos using ICAL at INO



Abstract:

- The India-based neutrino observatory is an underground research facility will be based in Pottipuram, Theni district of TamilNadu. The facility will host 51,000 ton magnetized Iron calorimeter (ICAL) detector along with few other experiments. The ICAL is aimed to measure the mass ordering of neutrinos using atmospheric muon neutrinos and muon anti-neutrinos. The magnetic field of 1.5 Tesla will allow ICAL to distinguish interaction initiated by neutrino or anti-neutrino. Neutrino less double Beta decay experiment will answer whether neutrino is Dirac or Majorana particle.

About the Speaker:

- Dr. Prafulla Kumar Behera is a associate professor at the Department of Physics IIT Madras since 2011. He obtained his Ph.D from Utkal University, working in BELLE experiment, KEK, Japan in 2003. He was a postdoctoral fellow at University of Pennsylvania, Philadelphia, USA from 2002 – 2006 working in BABAR experiment at SLAC, USA. Before joining IIT Madras, He was a research scientist at University of Iowa, USA from 2006 – 2011 working in ATLAS experiment. His areas of research interest include experimental collider physics including neutrinos. He is an active member of INO collaboration since 2011. He has authored more than 1100 international journal publication and part of the team, which discovered Higgs boson with the ATLAS experiment at CERN, July 2012.

