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国台学术报告 NAOC COLLOQUIUM

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Time: Wednesday 2:30 PM, Nov 25 **Location: A601 NAOC**

Neutrino Oscillations: Past, Present and Future

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Professor Yifang Wang obtained his BSc degree in Physics from Nanjing University in 1984 and his PhD degree from the University of Florence in 1992. He worked subsequently at MIT, Stanford University and became a researcher at the Institute of High Energy Physics (IHEP), Chinese Academy of Sciences, Beijing, China in 2001. He is the current director of IHEP. His research interests include neutrino physics, e^+e^- collision physics, cosmic rays, astrophysics, detector design and construction, and methods for data analysis. He has been involved in a number of international experiments, including L3, AMS, Palo Verde, KamLAND, and BES.

At IHEP, he led the effort for the design and successful construction of the BESIII detector. He led the Daya Bay neutrino oscillation experiment in China, which determined the neutrino mixing angle θ_{13} for the first time. This neutrino oscillation result was selected as one of the top 10 scientific breakthroughs by Science magazine in 2012. For his seminal discovery, Professor Wang was awarded the prestigious 2016 Breakthrough Prize.

Abstract

Neutrino oscillations had been one of the most successful stories in the history of particle physics. The speaker will review the discovery of neutrino oscillation and confirmations afterwards. In particular, he will explain a reactor-based neutrino experiment, Daya Bay, for mixing angle θ_{13} and its successor, JUNO experiment for the neutrino mass hierarchy as well studies for supernovae neutrinos, Geoneutrinos, solar neutrinos, proton decay, etc.

All are welcome! Tea, coffee, biscuits will be served at 2:15 PM.