

COLLOQUIUM BY WANG YIFANG*

NEUTRINO OSCILLATIONS: PAST, PRESENT AND FUTURE

TIME: 3-4PM, THURSDAY, 3 DECEMBER 2015

VENUE: AB 1079

*WINNER OF 2016 BREAKTHROUGH PRIZE IN FUNDAMENTAL PHYSICS!!!

Speaker: Wang Yifang, Director, the Institute of High Energy Physics, Chinese Academy of Sciences

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 of supernovae neutrinos, Geo-neutrinos, solar neutrinos, proton decay, etc.

BIO:

Professor Yifang Wang led the Daya Bay neutrino oscillation experiment in China, which precisely measured the neutrino mixing angle θ_{13} . This neutrino oscillation result was selected as one of the top 10 scientific breakthrough by Science Magazine in 2012, and later in 2015, for his seminal discovery Professor Wang was awarded the prestigious 2016 Breakthrough Prize.

Professor Yifang Wang obtained his BSc degree in Physics from Nanjing University in 1984 and his PhD degree from the University of Florence in 1991. He worked subsequently at MIT and Stanford University. He became a professor at the Institute of High Energy Physics in 2001, and the director in 2011. His research interest include neutrino physics, e^+e^- collision physics, cosmic rays, astrophysics, detector design and construction. In IHEP, he led the effort for the design and successful construction of the BESIII detector. He has also been involved in a number of international experiments, including L3, AMS, Palo Verde and KamLAND.