

Systematics, calibration and analysis techniques in JUNO

Thursday, November 1, 2018 3:55 PM (25 minutes)

The Jiangmen Underground Neutrino Observatory (JUNO) is a liquid scintillator detector aiming to determine the neutrino mass hierarchy and to perform precision measurements of neutrino mixing parameters by detecting reactor antineutrinos at a baseline of 53 km. JUNO physics programme also serves for the detection of supernova neutrinos, geoneutrinos and solar neutrinos. In order to achieve the main physics goals, we face the challenge of achieving the unprecedented energy resolution $< 3\%$ at 1 MeV. Introducing 26K 3" PMTs brings the multi-calorimeter concept into the reality to help event reconstructions and reduction of the non-stochastic component in the energy response. In this talk, we will share ideas of how to treat systematics uncertainties, calibration and analysis techniques to tackle challenges in JUNO.

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Session Classification: Systemtics and Analysis technique Parallel