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Analysis review of JUNO Experiment

After three neutrino mixing angles and two independent neutrino mass squared differences have been measured, neutrino physics has entered the precision era. Neutrino mass hierarchy and CP violation phase are the two remaining important unknown properties which could be measured by next generation neutrino oscillation experiments. Jiangmen Underground Neutrino Observatory (JUNO) is constructing a 20 kton multi-purpose liquid scintillator detector with unprecedented 3% energy resolution at 1 MeV. The main physics goal is to determine neutrino mass hierarchy with reactor antineutrino oscillation at baseline of 52.5 km with 3-4 sigma statistical significance. Besides, JUNO is also able to perform many other important neutrino physics measurements, including precision measurements of three neutrino oscillation parameters (θ_{12} , Δm_{21}^2 and Δm_{32}^2), supernova neutrino detection, solar neutrinos, etc. In this talk, I will review the analysis techniques in the JUNO experiment.

Primary author: Dr LING, Jiajie (Sun Yat-sen University)

Presenter: Dr LING, Jiajie (Sun Yat-sen University)

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