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Oscillation Physics Potential with Reactor Neutrino at JUNO

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The Jiangmen Underground Neutrino Observatory (JUNO) is currently under construction in an underground laboratory in South China, featuring a 20 kton liquid scintillator detector. The excellent energy resolution coupled with an large detector volume and outstanding background control provides a great opportunity to explore key areas in neutrino and astroparticle physics.
JUNO's primary goals are to determine the neutrino mass ordering and precisely measure the related neutrino oscillation parameters. Using reactor neutrino data, JUNO has the capability to determine the neutrino mass ordering with great significance and measure the neutrino oscillation parameters $sin^2\theta_{12}$, Δm^2_{21}, and $|\Delta m^2_{32}|$ with the sub-percent precision.
This talk will focus on the oscillation physics potential with reactor neutrinos at JUNO, including the sensitivity analysis and results based on the most recent understanding of the detector.

Collaboration (if any)

JUNO

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