中国物理学会高能物理分会第十四届全国粒子物理学术会议(2024)

Contribution ID: 54

Type: Oral report

Neutrino Oscillation Physics in JUNO

The Jiangmen Underground Neutrino Observatory (JUNO) is a multipurpose neutrino detector located 700 m underground and about 53 km away from six nuclear rectors in Southern China. It is currently under construction and will be deployed with ~17k 20-inch photomultiplier tubes (PMTs) and ~25k 3-inch PMTs surrounding 20 kton liquid scintillator. With an unprecedented 3% energy resolution at 1MeV, the primary physics goals of JUNO are to determine the neutrino mass ordering and measure the neutrino oscillation parameters $\sin^2\theta_{12}$, Δm^2_{23} to a sub-percent precision.

This talk will cover the neutrino oscillation physics in JUNO, including the sensitivity analysis and the results based on the most recent understanding of the detector.

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Track Classification: 中微子物理、粒子天体物理与宇宙学