

Detector calibration in the JUNO experiment

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The Jiangmen Underground Neutrino Observatory (JUNO) will be a 20-kiloton liquid scintillator detector, currently under construction in southern China. JUNO will be equipped with 17,612 20-inch photomultiplier tubes (PMTs) and 25,600 3-inch PMTs and will address a variety of physics programs including reactor/atmospheric/solar/geo/supernova neutrino observations and new physics searches. The calibration of the JUNO detector is one of the critical components to accomplish the primary experimental goal, the determination of the neutrino mass ordering by precisely measuring the reactor neutrino energy spectrum, as the accurate understanding of the energy scale (1% level) and unprecedented energy resolution as a liquid scintillator detector (3% at 1 MeV) are required. This talk will cover the JUNO calibration hardware systems and analysis strategy to achieve the aforementioned calibration requirements as well as the recent progress on the new calibration source development.

Working Group

WG 6: Detectors

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