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JUNO's physics prospects

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The 20 kton liquild scintillator detector of the Jiangmen Underground Neutrino Observatory (JUNO) is under construction in an underground laboratory in South China. It is expected to start data-taking in 2023. With an excellent energy resolution and large detector volume and excellent background control, JUNO is expected to determine the neutrino mass ordering, and provide precise measurements on the neutrino oscillation parameters $sin^2\theta_{12}$, Δm^2_{21}, and $|\Delta m^2_{32}|$. As a multi-purpose neutrino observatory, JUNO also has world competitive potential on the searches for diffuse supernova neutrino background (DSNB), the core-collapse supernova (CCSN) neutrinos, solar neutrino, atmospheric neutrinos, geo-neutrinos, nucleon rare decays and other new physics beyond the Standard Model. In this talk, I will present the latest evaluations on the prospects of JUNO' s physics goal.

In-person participation

No

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