

Status and physics prospects of Jinping Neutrino Experiment

The China Jinping Underground Laboratory (CJPL), which has the lowest cosmic-ray muon flux and the lowest reactor neutrino flux of any laboratory, is ideal to carry out low-energy neutrino experiments. With two detectors and a total fiducial mass of 2000 tons for solar neutrino physics, the Jinping neutrino experiment will have the potential to identify the neutrinos from the CNO fusion cycles of the Sun, to cover the transition phase for the solar neutrino oscillation from vacuum to matter mixing, and to measure the geo-neutrino fluxes, including the Th/U ratio. A 1-ton prototype has been taking data since 2017, where development of the slow liquid scintillator is being carried out. This talk will review the project and cover the recent progress.

Primary author: Prof. TANG, Jian (Sun Yat-Sen University)

Presenter: Prof. TANG, Jian (Sun Yat-Sen University)