

## The R&D progress of the Jinping Neutrino Experiment

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Thanks to the 2400 m overburden and the long distance to commercial reactors, the China Jinping Underground Laboratory (CJPL) is an ideal site for low background neutrino experiments. The Jinping Neutrino Experiment will perform an in-depth research on solar neutrinos, geo-neutrinos and supernova relic neutrinos. Many efforts were devoted to the R&D of the experimental proposal. A new type of liquid scintillator, with high light-yield and Cherenkov and scintillation separation capability, is being developed. The assay and selection of low radioactive stainless-steel (SST) was carried out. A wide field-of-view of 90 degree and high-efficiency of 98% light concentrator is developed. At the same time, the design, construction and initial operation status of a 1-ton prototype will also be discussed. The 1-ton prototype is constructed and placed underground at Jinping laboratory. The purpose of the prototype is to 1) test the performance of several key detector components, like acrylic, pure water, using of ultra-high molecular weight polyethylene rope, 2) understand the neutrino detection technology with liquid scintillator and slow liquid scintillator and 3) measure the in-situ Jinping underground background, like fast neutron.

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