

# Research and Development of Jinping Neutrino Experiment

*Tuesday, 18 June 2024 17:30 (2 hours)*

The Jinping Neutrino Experiment (JNE) is conducted at the China Jinping Underground Laboratory (CJPL), the deepest underground facility globally. JNE focuses on researching solar neutrinos, geo-neutrinos, supernova neutrinos, and neutrinoless double beta decay. The Jinping Neutrino one-ton prototype, located in CJPL-I, has completed measurements of cosmic rays and background. Currently, JNE is planning the construction of a low-background, multi-hundred-ton neutrino detector in CJPL-II by the end of 2026. Through simulations, the detector's geometry has been optimized, and structural design is finalized. The foundation pit excavation in D2 Hall of CJPL-II is complete. The upcoming detector will utilize novel 8-inch MCP-PMTs, currently undergoing testing. Our self-developed ADC have been tested on the one-ton prototype. Additionally, oil and water-based slow liquid scintillators (SLSs) have been developed. Reconstruction algorithms for SLSs have also been devised, enabling particle identification of electrons, gamma rays, and protons in the MeV-scale.

## Poster prize

Yes

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**Session Classification:** Poster session and reception 1

**Track Classification:** New technologies for neutrino physics