

1-ton Prototype Neutrino Detector Upgrade at CJPL-I

Friday 19 July 2024 20:40 (20 minutes)

The China Jinping Underground Laboratory (CJPL) is an excellent location for studying solar, geo- and supernova neutrinos. As an early stage of the Jinping Neutrino Experiment (JNE), we have been studying the performance of a 1-ton liquid prototype neutrino detector at CJPL-I. We aim to improve its electronics system and photomultiplier tubes (PMTs) to explore its potential capabilities further. We have developed a new electronic system with higher resolution, greater bandwidth, and faster storage speed. We plan to replace the current Hamamatsu 8-inch PMTs with North Night Vision (China) 8-inch MCP-PMTs and increase the number of PMTs from 30 to 60. These new technologies will be used for the future 500-ton neutrino detector at CJPL. The poster will present the upgrade plan, equipment, progress, and physical improvements of the 1-ton neutrino detector.

Alternate track

1. Neutrino Physics

I read the instructions above

Yes

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