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The status and prospects for China Jinping Underground Lab(CJPL)

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China Jinping underground Lab(CJPL) is the deepest underground laboratory with a rock overburden of 2400m. Now there are two phase in CJPL. CJPL-I is used for demonstration of CDEX, PandaX and low-background facility. A deep Underground and ultra-low Radiation background Facility for frontier physics experiments(DURF) was built in CJPL-II since Feb. 2020. The civil engineering of CJPL-II would be finished in Oct. 2023. Here the current status of the construction would be introduced in details. Noteworthy, the work about water-resistant and radon suppression during the construction and its effect by measurement would be illustrated. The status of development for ultra-low background facilities, such as Large Nitrogen vessel shielding device, large pure water tank shielding device, and assemble combine shielding device and ultra-low-background gamma spectrometers in CJPL-II, would be showed in the present. The prospects of dark matter experiments(CDEX, PandaX), Neutrinoless double beta decay experiments(target include Ge-76, Xe-136, Mo-100 and Se-82 et al), Nuclear Astrophysics experiment(JUNA), neutrino detect experiment(Qingting) and other experiment in CJPL-II is also introduced by this present.

Submitted on behalf of a Collaboration?

Yes

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