

Measurement of cosmic muon flux and cosmogenic neutron production at CJPL

China JinPing Underground Laboratory (CJPL) is an underground laboratory with 2800 meters rock overburden and is ideal to carry out experiment for rare-event searches. Cosmic muons and muon-induced neutrons present an irreducible background to neutrino experiment and dark matter experiment at CJPL. A precise measurement of the cosmic-ray background of CJPL would play an important role in the future experiments. Using a 1-ton liquid scintillator detector for the Jinping Neutrino Experiment (JNE), we give a measurement of cosmic muon flux and cosmogenic neutron production in liquid scintillator detector at CJPL. This study provides a clear understanding of cosmic-ray background at deep underground laboratory.

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