Contribution ID : **218** Type : **Talk in parallel session**

CDEX-300v: neutrinoless double beta decay experiment based on 76Ge

Tuesday, 31 August 2021 18:25 (15)

Neutrinoless double beta decay has been a key topic that could help scientists to understand the properties of the neutrino including whether the neutrino is its own antiparticle, lepton number violation and so on. The China Dark Matter Experiment (CDEX) aims at direct searches of light Weakly Interacting Massive Particles (WIMPs) and neutrinoless double beta decay experiment at the China Jinping Underground Laboratory (CJPL) based on germanium detector array. From 2021 on, CDEX collaboration is pushing forward to setup a CDEX-300v experiment based on 76Ge-enriched germanium array detector system to search neutrinoless double beta decays of 76Ge isotope. CDEX-300v detector system will includes a 76Ge-enriched germanium array detector system with total mass of 300 kg and the germanium detectors are immersed into a liquid argon cooling and active shielding system with volume of ~8 m^3. The liquid argon tank is located into a liquid nitrogen tank with a volume of 1725 m^3 for cooling down and further decreasing the ambient radioactive backgrounds. More details of CDEX-300v will be introduced in this talk.

Reference to paper (DOI or arXiv)

Your gender (free text)

Primary author(s) : YUE, Qian

Presenter(s) : YUE, Qian

Session Classification : Discussion Panel Neutrinos 3

Track Classification : Neutrino physics and astrophysics