Contribution ID: **599** Type: **Parallel session talk**

Towards the AMoRE II Experiment: Neutrinoless double-beta decay search with 100 kg of 100Mo

Friday 19 July 2024 11:00 (15 minutes)

The AMoRE-II experiment is the next phase of the AMoRE project. Its aim is to search for neutrinoless double beta decay of 100Mo isotopes. The experiment will use 100 kg of 100Mo target nuclei enriched in more than 95%, which are mainly contained in hundreds of scintillating lithium molybdate crystal absorbers to use MMC (metallic magnetic calorimeter) sensors for a cryogenic calorimeter. The detectors' performance has significantly improved compared to the previous phases. We anticipate a background level of approximately 10^-4 counts/keV/kg/year in the region of interest (ROI) by utilizing the low background detector material, an optimized shielding structure at Yemilab, the new underground laboratory with a 1000m overburden. We will present the overall effort to move towards the AMoRE-II phase

Alternate track

I read the instructions above

Yes

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Session Classification: Neutrino Physics

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