

Measurements of detector material samples with two HPGe detectors at the YangYang Underground Lab.

Two major experiments, the AMoRE (Advanced Mo based Rare process Experiment) searching for neutrinoless double beta decay and the COSINE searching for dark matter WIMPs (Weakly Interacting Massive Particles), are running in the Yangyang underground laboratory (Y2L). To understand their signals, it is necessary to know the backgrounds from their detector materials like fasteners, crystal, cables, connectors, and etc. By using two 100% HPGe detectors at the Y2L, the background levels of each material samples were measured and analyzed by using efficiencies estimated by a Geant4 simulation tool kit. We will present background measurements of the samples together with an improvement in the efficiency calibration using a mixed source including 10 known radioactive isotopes in this poster.

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