

## Recent results of the AMoRE-pilot experiment, a search for neutrinoless double beta decay of Mo-100

The Advanced Mo-based Rare Process Experiment (AMoRE) is a search for neutrinoless double beta decay of  $^{100}\text{Mo}$  in calcium molybdate ( $\text{CaMoO}_4$ ) crystals, made of Molybdenum enriched on  $^{100}\text{Mo}$  ( $\geq 95\%$ ) and Calcium depleted on  $^{48}\text{Ca}$  isotopes ( $\leq 0.002\%$ ), by using cryogenic detectors.

The ongoing pilot-phase experiment at the YangYang underground laboratory consists of a number of commissioning runs using six  $^{40}\text{Ca}^{100}\text{MoO}_4$  crystals of a total mass  $\sim 1.9$  kg.

In parallel, the first phase of the AMoRE experiment with about 5 kg of  $\text{CaMoO}_4$  crystals and additional R&D crystals is in preparation.

The background data of the AMoRE-pilot were analyzed and compared with Monte Carlo simulation results to identify their background sources.

In this presentation, the background modeling results will be presented and discussed.

### Co-Authors (Collaboration)

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