

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

*Saturday 7 July 2018 10:00 (15 minutes)*

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 by using cryogenic detectors at a temperature range of tens of millikelvin. The crystals are made of Molybdenum enriched on  $^{100}\text{Mo}$  ( $\geq 95\%$ ) and Calcium depleted on  $^{48}\text{Ca}$  isotopes ( $\leq 0.002\%$ ). The ongoing pilot 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 1.9 kg. At the same time, the first phase of the AMoRE experiment with about 5 kg of  $\text{CaMoO}_4$  crystals is in preparation. The physics data of the AMoRE-pilot were analyzed and fitted with Monte Carlo simulation results to identify their background sources. In this presentation, the fit results will be presented and discussed.

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