

Background Simulation of a search for neutrinoless double beta decay of Mo-100

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Background simulations have been performed for an experimental search for neutrinoless double beta decay of ^{100}Mo in calcium molybdate (CaMoO_4) crystals, the Advanced Mo-based Rare Process Experiment (AMoRE). Using GEANT4, effects of radioactive background sources such as ^{238}U and ^{232}Th in the first phase of AMoRE experiment configuration were simulated for the interior of crystals and surrounding materials. Expected background rates including the effect of random coincidence rate of background and double beta decay of ^{100}Mo have been estimated.

Summary

The current status of the AMoRE-I background simulation studies will be presented.

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