Amore-Pilot background Simulation

The AMoRE (Advanced Mo Rare process Experiment) project is the experiment searching for neutrino-less double beta decay of 100Mo.

Monte Carlo simulation using the Geant4 toolkit was performed to understand background level of detector configuration.

Decays of radioactive isotopes such as 232Th, 238U, 40k, 235U and their daughter nuclei were simulated in six CaMoO4 crystals, and in near-by detector materials.

Background spectra of crystals from the recent pilot measurements were fitted with simulation results to identify dominant background sources.

In this poster, the simulation results and fitting results will be presented.

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