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Background model of the CUPID-Mo $0\nu\beta\beta$ experiment

CUPID-Mo is searching for neutrinoless double beta decay with enriched $\text{Li}_2^{100}\text{MoO}_4$ scintillating crystals, operating at the Modane underground laboratory. During the first physics runs, started at the beginning of 2019, CUPID-Mo collected an exposure of more than 2 kg.y. The data validates the high level of radiopurity of the crystals and the excellent alpha-particle rejection.

In this work we present a model to reconstruct the CUPID-Mo energy spectra. The model is built from the Monte Carlo simulations of the background sources and exploits their distinctive signatures.

The investigation of the background sources in CUPID-Mo is precious to finely tune the construction choices of the next-generation experiment CUPID.

Mini-abstract

We present a background model to reconstruct the CUPID-Mo energy spectra.

Experiment/Collaboration

CUPID-Mo

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