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# The background model of the CUPID-Mo experiment

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CUPID-Mo, located in the Laboratoire Souterrain de Modane, in France, was a demonstrator for CUPID, the next generation neutrinoless double beta decay experiment. CUPID-Mo consisted of 20 enriched $Li_2{}^{100}MoO_4$ bolometers and 20 Ge light detectors, and aimed to demonstrate that the technology of particle identification based on scintillating bolometers is mature for a ton-scale experiment.
We have developed GEANT4 Monte Carlo simulations with detailed geometry of the CUPID-Mo set-up, and applied the detector response in terms of resolution and light yield. The MC simulations, together with screening and other measurements, are used as input for the construction of a background model. In this work, we present the resulting background index in the $0\nu\beta\beta$ region of interest, and the extracted radiopurity of the bulk and surface contaminations of the $Li_2{}^{100}MoO_4$ crystals, which are found to be sufficient for the CUPID goals.

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