

## **Cosmogenic background simulation and measurement for Mo100-based bolometric experiment at CJPL**

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The cosmogenic background is the most important source of the background of the  $0\nu\beta\beta$  decay search experiment. After being produced and transformed at the surface, there are several different cosmogenic radionuclides in the LMO crystals and shielding materials that will affect the background level of the  $0\nu\beta\beta$  decay search experiment and dark matter search experiment.

We simulated the activation of these nuclides after a period of exposure to cosmic rays by Geant4, CRY as the cosmic rays input. Then also with Geant4, We simulated the last energy deposition in the detector to assess the level of the cosmogenic background in our experiment. Furthermore, we plan to measure the activation of cosmogenic radionuclides in the LMO crystal with HPGe detector at CJPL.

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