Contribution ID: **27** Type: **Talk**

Backgrounds of the CUPID experiment

Friday, 4 October 2024 12:50 (20 minutes)

Next generation neutrinoless double beta experiments aims at covering the inverted hierarchy region of the neutrino mass spectrum, with sensitivities on the half-lives greater than 10^{27} years. The CUPID experiment will exploit cryogenic calorimeters to search for neutrinoless double beta decay of ^{100}Mo. To reach the target sensitivities one of the key requirements is the understanding and control of the backgrounds. This talk will detail the background sources relevant to the CUPID experiment. We will show the estimation of the background index for each of the sources. The estimations of the background from the radioactivity in the detector set-up are based on detailed Monte-Carlo simulations and on backgrounds of past experiments. Other backgrounds are derived from detector performances in R&D tests.

Primary author: LOAIZA, Pia (IJCLab CNRS/Université Paris Saclay)

Co-author: COLLABORATION, on behalf of CUPID

Presenter: LOAIZA, Pia (IJCLab CNRS/Université Paris Saclay)

Session Classification: Experiments Background, Models & Simulations