



ID de Contribution: 128

Type: YSF (Young Scientists Forum)

Status of CUPID-Mo

jeudi 15 mars 2018 18:37 (5 minutes)

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<!DOCTYPE html>
<html> <head> <script type="text/x-mathjax-config"> MathJax.Hub.Config( extensions: ["tex2jax.js"], jax: ["input/TeX", "output/HTML-CSS"], tex2jax: { inlineMath: [ ['$','$'], ["",
"] ], displayMath: [ ["$,$"], ["",
"] ], processEscapes: true }, "HTML-CSS": { availableFonts: ["TeX"] } ); </script> <script type="text/javascript" async src="https://cdnjs.cloudflare.com/ajax/libs/mathjax/2.7.2/MathJax.js"> </script> </head> <body> <p>CUPID-Mo is a bolometric demonstrator experiment searching for neutrinoless double decay ( $0\nu2\beta$ ) of  $^{100}\text{Mo}$ . The observation of this process, which is not allowed by the Standard Model, would determine the Majorana nature of neutrino and its mass scale.</p>
The CUPID-Mo detector array consists of 20 scintillating bolometers made of  $\text{Li}_2^{100}\text{MoO}_4$  crystals (2.34 kg of  $^{100}\text{Mo}$ ), assembled in a compact structure of 5 suspended towers. Data taking is ongoing in the EDELWEISS cryostat at the Underground Laboratory of Modane (LSM, France). The main goal of the CUPID-Mo experiment is to demonstrate "zero-background" conditions in the region of the expected  $0\nu2\beta$  decay peak of  $^{100}\text{Mo}$  with six months of measurement. The reproducibility of  $\text{Li}_2^{100}\text{MoO}_4$  scintillating bolometers with high performance should be confirmed, demonstrating the applicability of the CUPID-Mo technology for the future ton-scale  $0\nu2\beta$  decay bolometric experiment CUPID. </p> </body> </html>
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Summary

Auteur principal: ZOLOTAROVA, Anastasiia (CEA)

Orateur: ZOLOTAROVA, Anastasiia (CEA)

Classification de Session: YSF4