

Background suppression in the EDELWEISS-III experiment

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In dark matter WIMP searches the neutron shielding plays a crucial role in attenuating neutron flux and hence, suppressing nuclear recoil event rate - one of the key background mimicking WIMP interactions. The transition from EDELWEISS-II to EDELWEISS-III with 40 detectors with increased mass and improved background rejection has required the modification of the neutron shielding.

In this paper we describe the new neutron shielding design and give an estimate of the expected neutron rate in comparison with the previous stage of the experiment.

Summary

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