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Neutron Calibration System for the MiniCLEAN Experiment LU

FENG, Massachusetts Institute of Technology, MINICLEAN COLLABORATION — MiniCLEAN is a dark matter experiment using liquid argon (LAr) to detect nuclear recoils from weakly interacting massive particles. In order to characterize the detector response to these events, a neutron calibration system operating a pulsed deuterium-deuterium neutron source will be deployed. This calibration system will also be used to benchmark simulation physics crucial to understanding the neutron background, test neutron tagging techniques, and monitor detector health. Here we describe the hardware and software integration of the calibration system.

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