Monte Carlo Neutron Tagging Efficiency for the MiniCLEAN Experiment[1] LU FENG, Massachusetts Institute of Technology, MINICLEAN COLLABORATION — Neutrons constitute a serious background for dark matter direct detection experiments since they produce elastic nuclear recoil signals indistinguishable from those caused by weakly interacting massive particles (WIMPs). However, unlike WIMPs, neutrons often interact in the detector medium more than once; and we can utilize this property to identify or tag neutron events that fake WIMP signals. Here, we investigate the upper limit on neutron tagging efficiencies with Monte Carlo (MC) truth information.

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Lu Feng
Massachusetts Institute of Technology

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