

Abstract Submitted  
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**Cosmic ray contribution to the Cuoricino background** LAURA KOGLER, LBNL, CUORE COLLABORATION — CUORE is a proposed next-generation bolometric experiment to search for neutrinoless double beta decay in  $^{130}\text{Te}$ . Cuoricino is the recently finished prototype experiment for CUORE. To reach its goal, CUORE must achieve a background level of less than 0.01 counts/keV/kg/year. One potential source of background comes from cosmic ray muons. The experiment is located at a depth of 3500 m.w.e. in the Gran Sasso National Laboratories in Italy, where there is an average muon flux of approximately 1 per square meter per hour. We have investigated the contribution of cosmic ray muons to the background of Cuoricino by installing plastic scintillator muon counters outside of the detector to directly measure the correlation between intercepted muons and recorded events in the detector. We will present the results of this analysis and the implications for Cuoricino and CUORE.

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