

Abstract Submitted  
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**Measured Muon and Neutron Flux at Different Levels in the Homestake Mine**<sup>1</sup> JONATHAN TOTUSHEK, FREDERICK GRAY, CHRISTOPHER RUYBAL, Regis University, DONGMING MEI, KEENAN THOMAS, CHAO ZHANG, The University of South Dakota — External sources of background, particularly fast neutrons and cosmogenic radioactivity from muon-induced processes, are background matter that must be eliminated for underground experiments in pursuit of double beta decay, WIMPs, and oscillations of low-energy neutrinos. We report preliminary results about muon flux and the integrated neutron flux at different levels in Homestake Mine. These results can be used as the guidance for the design of the shielding.

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