

Abstract Submitted
for the APR11 Meeting of
The American Physical Society

Measurements of Neutron Shielding by Water and Concrete from 100 - 800 MeV KIMBERLY PALLADINO, JOCELYN MONROE, SHAWN HENDERSON, MIT — Nuclear recoils caused by neutron scatters may feign WIMP signals in direct dark matter detectors. Cosmic muon spallation is a considerable source of neutrons extending to GeV energies. Low background experiments operate below ground to reduce the incident muon flux, and commonly employ water or concrete shielding to absorb neutrons created in the surrounding cavern material. Here we present the measurements of the shielding efficiency of these materials for incident neutrons of 100-800 MeV taken at the Los Alamos Neutron Science Center, the first such measurements in this energy range.

Kimberly Palladino
MIT

Date submitted: 14 Jan 2011

Electronic form version 1.4