

Abstract Submitted
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Neutron-Induced Backgrounds on Germanium-76 for Neutrinoless Double-Beta Decay Studies¹ JOSHUA ADAMS, MARY KIDD, Tennessee Technological University, SEAN FINCH, WERNER TORNOW, TUNL/Duke University — There are many large-scale experiments attempting to measure the neutrinoless double-beta decay of ^{76}Ge . As in many rare-event searches, it is vital to understand the potential backgrounds present. One potential background is due to neutron-induced gamma rays emitted by ^{76}Ge in the process of neutron inelastic scattering. The Q-value for neutrinoless double-beta decay of ^{76}Ge is 2039 keV, so gamma rays emitted in the de-excitation of ^{76}Ge above that value are of interest. In this study, we report cross-section results for an incident neutron energy of 4.5 MeV.

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