

Abstract Submitted  
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**A Measurement of Neutrino-Induced Neutron Production in Lead and Iron Nuclei** SAMUEL HEDGES, Duke University, COHERENT COLLABORATION — Neutrino-nucleus interactions at low energies can produce excited nuclear states that can de-excite by emitting particles, including neutrons. Neutrino-induced neutrons (NINs) produced in common gamma shielding material, such as lead and iron, can pose a background for coherent elastic neutrino-nucleus scattering experiments. Additionally, NIN production in lead is the primary mechanism for the Helium and Lead Observatory (HALO) to detect supernova neutrinos, and iron-based supernova NIN detectors have been proposed. The COHERENT collaboration has deployed two detectors to study NIN production in lead and iron to the Spallation Neutron Source (SNS) at Oak Ridge National Laboratory (ORNL). An overview of the detector design, signal predictions, and latest results will be presented.

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