

Abstract Submitted
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Update on Work on COH-Ar-750 MAXIMILIAN HUGHES, Indiana Univ - Bloomington, COHERENT COLLABORATION — Coherent elastic neutrino-nucleus scattering (CEvNS) has been detected in a 24 kg single-phase liquid argon (LAr) scintillator detector. Further data collection and analysis for a 5σ measurement is ongoing. To go to precision measurements of the CEvNS recoil spectrum, which can be used to probe other physics such as non-standard neutrino interactions and nuclear form factors, a tonne-scale detector is required. To obtain an event rate 20 times that of the 24 kg detector with a low threshold, a 750 kg LAr scintillator detector has been designed by the COHERENT collaboration to be deployed at the Spallation Neutron Source at Oak Ridge National Laboratory. The 750 kg detector will be sensitive to inelastic charged-current and neutral-current events and to any light accelerator-produced dark matter. This talk will give an update on current work on the light collection and cryogenics of the detector.

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