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Status of the CENNS-10 Liquid Argon Detector for the COHERENT Experiment JACOB ZETTLEMOYER, Indiana Univ. - Bloomington, COHERENT COLLABORATION — The COHERENT experiment at the Oak Ridge National Laboratory (ORNL) Spallation Neutron Source (SNS) is designed to measure coherent elastic neutrino nucleus scattering (CEvNS), which is predicted to occur, but has yet to be observed. A variety of detectors, with different scattering nuclei, will be used to demonstrate the N^2 dependence of the CEvNS process. COHERENT has deployed a 14 kg CsI crystal, a 185 kg NaI crystal array, and a 28 kg LAr detector and will deploy 10 kg PPC HPGe in late 2017. The CENNS-10 LAr detector is a cylindrical single-phase scintillation-only device with two 8" photomultiplier tubes (PMTs) at the top and bottom of the detector and a tetraphenyl butadiene-coated cylinder inside the LAr volume between the PMTs as a wavelength shifter that makes up the fiducial volume. CENNS-10 recently completed a first run in May 2017 and summer 2017 activities include an upgrade to improve the light collection ability of the detector through the use of improved wavelength shifting techniques before the next run. The improvement and status of CENNS-10 will be presented along with the future of the liquid argon program for COHERENT.

Jacob Zettlemoyer
Indiana Univ. - Bloomington

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