

Abstract Submitted
for the APR20 Meeting of
The American Physical Society

Detection of CEvNS on Argon in the CENNS-10 Liquid Argon Detector JACOB DAUGHETEE, University of Tennessee, Knoxville, COHERENT COLLABORATION — In 2017, the COHERENT collaboration made the first observation of coherent elastic neutrino-nucleus scattering (CEvNS) using a 14.6 kg CsI scintillating crystal detector located at the Spallation Neutron Source (SNS) at Oak Ridge National Laboratory. COHERENT employs a suite of detectors at the SNS to search for CEvNS in different target nuclei and to measure potential backgrounds. This multi-target program allows for testing of Standard Model predictions for CEvNS as well as for verifying the N^2 -dependence of the cross section of this interaction. CENNS-10, a 24 kg liquid argon scintillation detector, has been actively taking data at the SNS since the spring of 2017. This talk will detail the methods and results of a search for and detection of CEvNS in CENNS-10 data.

Jacob Daughetee
University of Tennessee, Knoxville

Date submitted: 10 Jan 2020

Electronic form version 1.4