

Abstract Submitted  
for the APR15 Meeting of  
The American Physical Society

**COHERENT First Steps for an Experimental Neutrino Program at the Spallation Neutron Source** GRAYSON RICH, Triangle Universities Nuclear Laboratory, COHERENT COLLABORATION — The COHERENT Collaboration has been formed to make a first measurement of coherent neutral-current elastic neutrino-nucleus scattering (CENNS). Toward this, the Spallation Neutron Source (SNS) at Oak Ridge National Laboratory has been identified as the premier facility for this measurement due to several factors, including: high neutrino flux, appropriate neutrino energies, SNS beam time structure for significant background reduction, and the ability to suitably place detector systems sufficiently near the neutrino source. An ongoing background measurement campaign at the SNS is identifying candidate locations and characterizing primary background signals for a CENNS detector system. The result of current efforts and their implications for a CENNS measurement at the SNS will be discussed.

Donald Hornback  
Oak Ridge National Lab

Date submitted: 09 Jan 2015

Electronic form version 1.4