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COHERENT Elastic Neutrino-Nucleus Scattering at the SNS MATTHEW GREEN, NC State University / ORNL, COHERENT COLLABORATION — Taking advantage of technologies which have come to maturity and the availability of world-class pulsed neutrino source, the COHERENT collaboration seeks to measure for the first time coherent, elastic neutrino-nucleus scattering (CEvNS). Using neutrinos created by stopped pions at the Spallation Neutron Source (SNS) of Oak Ridge National Laboratory, several detector systems are being deployed to limit systematic uncertainties and unambiguously observe the N^2-dependence on the cross section. The current status of the efforts of the collaboration will be discussed and longer-term physics goals of the collaboration will be addressed, including the use CEvNS as a probe to search for non-standard neutrino interactions and as a way to measure the weak mixing angle.

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