

Neutrino Non-Standard Interaction Studies with COHERENT at the Spallation Neutron Source

The COHERENT collaboration's primary objective is to measure coherent elastic neutrino-nucleus scattering (CEvNS) using the unique, high-quality source of tens-of-MeV neutrinos produced as a by-product during normal operation of the Spallation Neutron Source (SNS) at Oak Ridge National Laboratory (ORNL). COHERENT made the first measurement of CEvNS using a Cs[Na] detector in 2017. Additional measurements are ongoing and planned using multiple detector materials and technologies. COHERENT's "first light" measurement provided the current best constraints on parameters describing non-standard interactions (NSI) of neutrinos with quarks. This poster will describe the current constraints on NSI and the future sensitivity of COHERENT's suite of detectors in "Neutrino Alley".

Authorship annotation

for the COHERENT collaboration

Session and Location

Wednesday Session, Poster Wall #28 (Robert-Schumann-Room)

Poster included in proceedings:

yes

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Track Classification: Poster (not participating in poster prize competition)