

A 185 kg NaI[Tl] Detector for Observing the Charged-Current Neutrino Interaction on ^{127}I

Authorship annotation

for the COHERENT collaboration

Session and Location

Wednesday Session, Poster Wall #101 (Auditorium Gallery Left)

Abstract content

A 185 kg NaI[Tl] detector has been deployed to the Spallation Neutron Source (SNS) at Oak Ridge National Laboratory (ORNL) to measure the charged-current neutrino interaction cross section on ^{127}I . Results from an initial run will be shown, as well as improvements from a recent upgrade in which muon vetos were deployed to reduce backgrounds. In addition to measuring the charged-current interaction, the 185 kg detector is also measuring low energy backgrounds in the region of interest for observing coherent elastic neutrino-nucleus scattering of ^{23}Na nuclei. A tonne-scale version of the detector is currently being developed with the capability to simultaneously observe these two interactions.

Poster included in proceedings:

yes

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Session Classification : Poster Session Wednesday

Track Classification : Poster (participating in poster prize competition)