The Spallation Neutron Source (SNS) at Oak Ridge National Lab produces pulsed neutrinos in the sub-50 MeV range that are advantageous for coherent elastic neutrino-nucleus scattering (CEvNS) observation.
Neutrino Flux Simulations for COHERENT

Neutrino spectra for 1 GeV protons

Assigned uncertainty: 10%
Possible experimental options:
- D$_2$O detector at SNS
- Measure pion production from p + Hg

At 20 m from the target, with $8.7 \times 10^{15}$ POT/second:
$\Phi_{\nu_\mu + \bar{\nu}_\mu + \nu_e} = 4.3 \times 10^7 \text{ neutrinos/cm}^2\text{s}$.

Neutrino flux at given proton energy

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