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## Neutrinos Physics at ORNL and PROSPECT Experiment Status

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Neutrino physics has entered an era of precision measurements, revealing gaps in our knowledge of the fundamental nuclear data-underlying reactor modeling codes and, potentially, the quantum mechanical behavior of reactor antineutrino emissions. Oak Ridge National Laboratory (ORNL) has two powerful neutrino sources providing unique opportunities for basic and applied research. Firstly, the 85MW High Flux Isotope Reactor (HFIR) at ORNL is an intense source of low energy electron antineutrinos. HFIR burns highly-enriched uranium fuel, meaning that >99% of antineutrinos emitted by the compact core derive from  $^{235}\text{U}$  fissions. Secondly, the high-quality pion-decay-at-rest neutrino source at the Spallation Neutron Source (SNS) provides an intense flux of neutrinos in the few tens-of-MeV range, with a sharply-pulsed timing structure that is beneficial for background rejection. I will review some of the current activities taking place at ORNL including The Precision Oscillation and Spectrum Experiment, or PROSPECT under construction which is soon to be deployed at HFIR.

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