Abstract Submitted
for the DNP16 Meeting of
The American Physical Society

PROSPECT: The Precision Reactor Oscillation and Spectrum Experiment THOMAS LANGFORD, Yale University, PROSPECT COLLABORATION — PROSPECT is a phased experiment consisting of segmented ^{6}Li-loaded liquid scintillator antineutrino detectors designed to probe short-baseline neutrino oscillations and precisely measure the reactor antineutrino spectrum. The experiment will be located at the High Flux Isotope Reactor (HFIR) at Oak Ridge National Lab. The first phase is a movable $\sim$3 tonne detector located 7-12 m from the compact, highly enriched uranium core. Over the past three years, PROSPECT has deployed multiple detectors at HFIR to understand the local background environment and demonstrate active and passive background rejection. Measuring the neutrino spectrum from ^{235}U will give insight to the recent spectral discrepancies and provide an important benchmark for future reactor experiments. PROSPECT will probe the sterile neutrino best-fit region at 3σ within one year of operation at HFIR. We will discuss the design, experimental program, and discovery potential of the experiment.

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Date submitted: 01 Jul 2016 Electronic form version 1.4