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PROSPECT: The Precision Reactor Oscillation and Spectrum Experiment

Saturday, 30 June 2018 09:00 (30 minutes)

PROSPECT is a short-baseline reactor antineutrino experiment designed to make a reactor model-independent search for eV-scale sterile neutrino oscillation and measure the 235U antineutrino energy spectrum from the High Flux Isotope Reactor at Oak Ridge National Laboratory. PROSPECT consists of a 4-ton, highly-segmented 6Li-loaded liquid scintillator detector operated at baselines ranging from 7-9m from the compact, highly-enriched uranium reactor core. Extensive prototyping has shown excellent light collection efficiency and background rejection capabilities. This talk will report on the status and initial performance of the experiment.

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