

Abstract Submitted  
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**PROSPECT Background Studies and Operation of Li-Loaded Liquid Scintillator Detectors at a Research Reactor**<sup>1</sup> THOMAS LANGFORD, Yale University, PROSPECT COLLABORATION — Segmented antineutrino detectors placed near compact research reactors provide an excellent opportunity to probe short-baseline neutrino oscillations and precisely measure the reactor antineutrino spectrum. PROSPECT is a phased experiment that will explore the favored reactor anomaly parameter space at the High Flux Isotope Reactor (HFIR) at Oak Ridge National Lab. Measurements of the reactor correlated and ambient backgrounds will be presented, as well as a discussion of active and passive mitigation plans. A lithium-loaded liquid scintillator test detector is currently in operation at HFIR within a prototype shielding cave. Results from recent operation will be presented along with a discussion of their impact on PROSPECT.

<sup>1</sup>on behalf of the PROSPECT collaboration

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