

Abstract Submitted  
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**PROSPECT-II Detector Upgrade and Sterile Neutrino Oscillation Sensitivity**<sup>1</sup> MANOA ANDRIAMIRADO, Illinois Institute of Technology, PROSPECT COLLABORATION — The Precision Reactor Oscillation and Spectrum, or PROSPECT, detector is designed to search for eV-scale sterile neutrino oscillation. It consists of segmented <sup>6</sup>Li-doped liquid scintillator deployed at ~7m from the High Flux Isotope Reactor at Oak Ridge National Laboratory. As a result of the short baseline deployment, the PROSPECT detector is excellent to probe mass-squared splitting between 0.1-10 eV<sup>2</sup>. While new limit on sterile neutrino has been reached with PROSPECT recent results, progress remains to be made. An improved version of PROSPECT detector is in progress that will exceed the current limit in the oscillation phase space. This talk will discuss PROSPECT-II detector and its projected sensitivity for future deployments.

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