

Abstract Submitted
for the APR18 Meeting of
The American Physical Society

Assembly and Installation of the PROSPECT Short-Baseline Antineutrino Detector¹ XIANYI ZHANG, Illinois Inst of Tech, PROSPECT COLLABORATION — PROSPECT, the Precision Reactor Oscillation and SPECTrum experiment, is a short-baseline reactor antineutrino experiment designed to precisely measure the fission generated antineutrino spectrum of ^{235}U utilizing an optically segmented 4-ton ^6Li liquid scintillator target. This measurement will enable a further investigation of the origin of discrepancies between measured and predicted reactor antineutrino fluxes and spectra while simultaneously probing the possible existence of eV^2 -scale sterile neutrino oscillations independent of the underlying reactor antineutrino flux models. The PROSPECT detector was completed in late 2017, and began taking physics data in 2018 at the High Flux Isotope Reactor at the Oak Ridge National Laboratory. This talk will provide an introduction to PROSPECT's experimental setup and physics goals, while highlighting the design, assembly and deployment of the antineutrino detector.

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Date submitted: 11 Jan 2018

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