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^{227}Ac as a Calibration Source in PROSPECT DANIELLE BERISH, Temple University, PROSPECT COLLABORATION — The Precision Reactor Oscillation and SPECTrum Experiment (PROSPECT) is designed to probe short baseline oscillations of antineutrinos in search of eV-scale sterile neutrinos and precisely measure the ^{235}U reactor antineutrino spectrum from the High Flux Isotope Reactor (HFIR) at Oak Ridge National Laboratory. The PROSPECT antineutrino detector will provide excellent background rejection and position resolution due to its segmented design and use of ^{6}Li-loaded liquid scintillator. Due to characteristics of its decay chain, ^{227}Ac has been proposed as a calibration source that would be dissolved evenly throughout the liquid scintillator. We will present results showing the benefits of using a dissolved ^{227}Ac source by exploiting the correlated production of alphas from $^{219}\text{Rn} \rightarrow {}^{215}\text{Po} \rightarrow {}^{211}\text{Pb}$ in the ^{227}Ac decay chain.

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