Abstract Submitted
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Development of lithium-loaded liquid scintillator for PROSPECT[1] DANIELLE NORCINI, Yale Univ, PROSPECT COLLABORATION — The PROSPECT experiment will use a segmented detector positioned 7-20m from the High Flux Isotope Reactor core to measure the antineutrino spectrum of uranium-235 and perform a sterile neutrino search. Such measurements require the use of liquid scintillator with the capability to distinguish prompt and delayed signals from inverse beta decay events. The characterization of light yield, pulse shape discrimination performance, and neutron capture properties of the lithium-loaded scintillator have been studied with a test detector at Yale. These results will be discussed in the context of their application to antineutrino detection with the PROSPECT experiment.

[1]on behalf of the PROSPECT collaboration

Danielle Norcini
Yale Univ

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