



Danielle Norcini
Yale University

November 6, 2018 at 12:00 p.m. in WLC-245

First results from the PROSPECT reactor neutrino experiment



Experiments at nuclear reactors have played a key role in determining the properties of the weakly-interacting neutrinos. Results from recent reactor experiments suggest a disagreement between the observed antineutrino flux and energy spectrum when compared to predictions. Beyond the Standard Model sterile neutrinos and corrections to complex nuclear models have been posed to explain the discrepancy. To address this physics, the PROSPECT experiment precisely measures antineutrino energy spectra at multiple, very short baselines ($< 10\text{m}$) from the High Flux Isotope Reactor. This talk details the first sterile neutrino oscillation search and measurement of the uranium-235 antineutrino spectrum from PROSPECT.

Lunch is served outside of WLC-245 starting at 11:45 a.m. RSVP requested.

Sponsored by the Flint Fund, Yale Wright Laboratory, Yale University, and the Yale Physics Department.