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**Results from the PROSPECT Neutrino Experiment at HFIR**[1]
JIM NAPOLITANO, Temple University, PROSPECT COLLABORATION — The Precision Oscillation and Spectrum (PROSPECT) experiment measures $\bar{\nu}_e$ emitted by the highly enriched $^{235}$U core of the High Flux Isotope Reactor (HFIR) at Oak Ridge National Lab. The two-ton detector has 154 independent liquid scintillator modules, doped with $^{6}$Li for detection of the delayed neutron from the inverse beta decay reaction $\bar{\nu}_e p \rightarrow e^+ n$. PROSPECT sits at the Earth's surface and close to the reactor, yet achieves better than a 1:1 signal-to-background ratio. We have measured the shape of the $\bar{\nu}_e$ spectrum, and have analyzed it both for sterile neutrino oscillations and for comparison to predictions of the cumulative fission $\beta$ spectrum. Results based on more than six month's running, including reactor on and off comparisons, will be presented.

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