

The Accelerator Neutrino Neutron Interaction Experiment (ANNIE)

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The Accelerator Neutrino Neutron Interaction Experiment (ANNIE) aims to measure the neutron abundance in the final state of neutrino-nucleus interactions. This measurement will have a direct impact on our understanding of neutrino interactions and could lead to a reduction of systematic uncertainties and improvements in signal-background discrimination for future neutrino detectors. The ANNIE detector uses 30 tons of gadolinium-loaded water to enhance the neutron-capture cross section. It is instrumented with a combination of conventional photomultipliers and novel Large Area Picosecond Photodetectors (LAPPDs). After a background characterization phase, the detectors have been installed in the Booster Neutrino beam at Fermilab and has begun taking data. This presentation will show first data from the ANNIE experiment.

Secondary track (number)

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