

Study of neutrino-nucleus interactions with ANNIE experiment

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The Accelerator Neutrino Neutron Interaction Experiment (ANNIE) experiment is a 26-ton gadolinium-loaded water Cherenkov detector located on the Booster Neutrino Beam at Fermilab. The experiment has a two-fold motivation: to perform a physics measurement and to advance new detector technologies. The measurement of final state neutron multiplicity from neutrino interactions in water as a function of momentum transfer will lower systematic uncertainties for future long-baseline neutrino experiments. The experiment is currently commissioning large-area picosecond photodetectors that will improve time and spatial resolution. I will present the current status of the ANNIE experiment along with future plans.

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