

## Status of the Accelerator Neutrino Neutron Interaction Experiment (ANNIE)

The Accelerator Neutrino Neutron Interaction Experiment (ANNIE) is a Gadolinium-loaded water Cherenkov detector located in the Booster Neutrino Beam at Fermilab with the primary goal of measuring the final state neutron multiplicity of neutrino-nucleus interactions. This measurement will improve our understanding of complex neutrino-nucleus interactions and help to reduce the associated systematic uncertainties, thus benefiting the next generation of long-baseline neutrino experiments. ANNIE is the first experiment to deploy an array of the Large Area Picosecond Photodetector (LAPPDs) in a neutrino detector. In this poster, we will briefly discuss the detector system, overall progress, and status of the experiment including recent data. In addition, future R&D efforts involving using the novel detection medium of water-based Liquid Scintillators will be briefly emphasized

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