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ANNIE: Overview and Physics goals

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The Accelerator Neutrino Neutron Interaction Experiment (ANNIE) is a 26-ton Gd-doped water Cherenkov detector installed in the Booster Neutrino Beam (BNB) at Fermilab. The main physics goal of the experiment is to measure the final state neutron multiplicity of neutrino-nucleus interactions to improve the systematic uncertainties in oscillation experiments. Complementing this goal, ANNIE tests novel technologies such as water-based liquid scintillator (WbLS) and Large Area Picosecond PhotoDetectors (LAPPDs). This poster provides an overview of the experiment describing the status and physics goals.

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