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First results from the LAPPDs in ANNIE

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The Accelerator Neutrino Neutron Interaction Experiment (ANNIE) is a 26-ton gadolinium doped water Cherenkov detector with a submerged water-based liquid scintillator filled vessel. It is on-axis of the Booster Neutrino Beam (BNB) at Fermilab, and its main physics goal is to measure the neutrino cross-section which will improve the systematic uncertainties of next-generation long-baseline neutrino experiments. The first such measurement will be the final state neutron multiplicity of neutrino-nucleus interactions in water. ANNIE is also the first large-scale high energy physics experiment to deploy multiple Large Area Picosecond Photodetectors (LAPPD), a novel photon detector technology with a timing resolution of <100 ps and a sub-centimeter spatial resolution which will help to improve the vertex reconstruction. This poster will give an update on the status of the LAPPD deployment as well as first results from neutrino beam induced events recorded by the LAPPDs.

Submitted on behalf of a Collaboration?

Yes

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