

New Perspectives 2020



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The future of ANNIE in 10 minutes

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The Accelerator Neutrino Neutron Interaction Experiment (ANNIE) is a Gadolinium doped 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. ANNIE will make use of pioneering photodetectors called Large Area Picosecond Photodetectors (LAPPDs) with less than 100 picosecond time resolution to enhance its reconstruction capabilities and demonstrate the feasibility of this technology as a new tool in high energy physics. After successfully taking commissioning beam and calibration data runs at the beginning of 2020, the future of ANNIE holds the exciting milestone of the first LAPPD deployment into the detector scheduled to happen this fall. Furthermore, additional future R&D efforts involving the use of the novel detection medium of water-based Liquid Scintillators will be highlighted in this talk.

Summary

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