

# ANNIE: The First Physics Experiment to Deploy LAPPDs

*Wednesday 26 May 2021 05:12 (18 minutes)*

The Accelerator Neutrino Neutron Interaction Experiment (ANNIE) is a 26-ton gadolinium-doped water Cherenkov detector located on-axis of Fermilab's Booster Neutrino Beam. ANNIE's main physics goal is to measure the final state neutron multiplicity of neutrino-nucleus interactions as a function of momentum transfer. This measurement will improve our understanding of these complex interactions and help reduce the associated systematic uncertainties, thus benefiting the next generation of long-baseline neutrino experiments. ANNIE will achieve its physics goals with the use of a new type of photodetector, the Large Area Picosecond Photodetector (LAPPD). The experiment is the first physics experiment to deploy an array of LAPPDs. Much progress has been made towards the full characterization and development of a LAPPD system. In this talk, the results of this development testing will be discussed, demonstrating the picosecond timing and centimeter-level spatial capabilities of the LAPPD.

## TIPP2020 abstract resubmission?

No, this is an entirely new submission.

## Funding information

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**Session Classification:** Posters: Neutrino Experiments

**Track Classification:** Experiments: Experiments: Neutrino