

Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Event Classification in ANNIE DAVID MAKSIMOVIC, German Physical Society, ANNIE COLLABORATION — The Accelerator Neutrino Neutron Interaction Experiment (ANNIE) is a 26-ton Gadolinium-doped water Cherenkov detector located at the Booster Neutrino Beam (BNB) at Fermilab. The scientific aim of ANNIE is the study of the cross-section and the neutron multiplicity of GeV neutrinos in the BNB. These measurements will benefit next generation neutrino experiments through the reduction of systematics and understanding the underlying interactions. Furthermore, ANNIE serves as a testbench for new experimental techniques such as the implementation of ultrafast Large Area Picosecond Photodetector (LAPPD), Gadolinium-doped water and application of Convolutional Neural Networks (CNNs) for event classification. For the primary analysis of ANNIEs physics run, we present in this talk the selection methods and tools necessary for the classification of CC muon-events and neutron counting.

David Maksimovi
German Physical Society

Date submitted: 08 Jan 2021

Electronic form version 1.4