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Effects of Proton Incident Angle on Neutrino Flux for DUNE ERIC AMADOR, Author, JEAHOON YU, Supervisor, JOSHUA MEDFORD, RONALD MUSSER, ELIZABETH MALLORY, ANIMESH CHATTERJEE, KIMBERLY NGUYEN, SUSAN KEMBOI, MONICA AVILA, GARRETT BROWN, coauthor, DUNE/HIGH ENERGY PHYSICS GROUP UTARLINGTON COLLABORATION — The Deep Underground Neutrino Experiment (DUNE) is a project under construction at Fermi Lab with the focus of studying neutrino oscillations through proton-target collisions. Using computer simulations at Fermi Lab, my study will enable me to observe the generation of electron and muon neutrinos. The purpose of my study is to maximize the muon neutrino and minimize the electron neutrino fluxes. This can be achieved by applying an incident angle on the proton beam and observe the parent pions which decay into neutrino particles. Future results will allow DUNE group members to run experiments more efficiently with lowered background noise.

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