

Abstract Submitted
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Neutrino Trigger Study at the Short-Baseline Far Detector (ICARUS) with the Photomultiplier System¹ RYAN HOWELL, University of Rochester, ICARUS COLLABORATION — ICARUS, a liquid argon time projection chamber (LArTPC), will employ an array of 180 photomultiplier tubes (PMTs) to detect scintillation light in the detector. The Hamamatsu R5912-MOD brand PMTs will detect this scintillation light, which is the first indication that a neutrino event has occurred. The trigger system will then identify whether the event is a neutrino event of interest and tells the rest of the detector system to start saving data. A fully simulated trigger system was used for this study, as well as neutrino samples generated by GENIE and cosmic samples generated by CORSIKA. In this presentation, I will describe the simulated trigger efficiency with which the PMT system in ICARUS will identify neutrino events from two different neutrino beams, as well as the performance of the trigger system with relation to background.

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