

Abstract Submitted
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MicroBooNE TPC trigger and GPS timing¹ LEONIDAS KALOUSIS, Virginia Tech — MicroBooNE will be the largest Liquid Argon (LAr) Time Projection Chamber (TPC) in the US and will take data in the Booster Neutrino Beam (BNB) at Fermilab. The main motivations to build MicroBooNE are the investigation of the excess of low energy electromagnetic events seen by MiniBooNE, detailed cross section studies, and the advance LAr R&D in US. In this talk I will describe the development of an offline trigger using the TPC information and the MicroBooNE features that allow such a development. A TPC based trigger is a triggering system that can be used to isolate events that occur in the TPC and are independent of the neutrino beam, such as SuperNovae, burst neutrinos and proton decay signatures that will be the subject of future study in large LAr detectors, like LBNE, if they are sited underground. These triggers can also be used to reduce cosmic muon background-induced events, which is of general interest for surface-based LAr TPCs.

¹for the MicroBooNE collaboration

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