Development of a Supernova Neutrino Trigger for LArTPC Detectors[1] CLAIRE HINRICHS, University of Maryland, College Park, GEORGIA KARAGIORGI, JOS CRESPO-ANADN, Nevis Laboratories, Columbia University, MICROBOONE COLLABORATION COLLABORATION — Supernova neutrinos provide scientists a unique view of core-collapse supernova phenomena that is unachievable through electromagnetic counterpart observation. The future Deep Underground Neutrino Experiment (DUNE) will be using a liquid argon time projection chamber (LArTPC) detector and will be sensitive to supernova neutrino events, provided the DUNE detector would be able to trigger on a potential supernova burst. The currently running MicroBooNE LArTPC neutrino detector is being used as a platform for the development of LArTPC based triggering for supernova neutrinos, and the efforts are ongoing to demonstrate some of the trigger schemes envisioned for DUNE. This poster will describe these development efforts and future plans.

Claire Hinrichs
University of Maryland, College Park

Date submitted: 11 Jan 2020   Electronic form version 1.4