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Readout Electronics for the Time Projection Chamber in the Microboone Experiment

MicroBooNE is a Liquid Argon Time Projection Chamber (LArTPC) neutrino detector which will be located in the Booster Neutrino Beamline at Fermilab. MicroBooNE aims to explore the low-energy excess in the ν_e spectrum recorded in MiniBooNE and serves as an R&D experiment for future LArTPC detectors.

This poster presents an overview of the readout for the MicroBooNE TPC. Signals read out from the TPC will measure ionization generated by particles, allowing for spacial and calorimetric reconstruction of events. MicroBooNE data will be read out in two modes: one triggering on the neutrino beam, and one continuously acquiring data in order to record potential supernova neutrino events. For the latter readout mode, a compression scheme will be implemented to maintain manageable data rates while preserving data quality. Examples of such compression schemes are also presented in this poster.

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