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Noise Filtering and Signal Calibration in the MicroBooNE LArTPC JYOTI JOSHI, XIN QIAN, Brookhaven National Laboratory, MICRO-BOONE COLLABORATION COLLABORATION — In large liquid argon time projection chambers (LArTPCs), TPC signal processing, which recovers the number of ionized electrons arriving at anode wire planes from the raw digitized induction signals, is a crucial step towards automated event reconstruction. The first stage of signal processing is the identification and removal of any excess TPC noise with minimal impact on the true signal. In this talk, first I will describe the characterization and software filtering techniques of various TPC noise observed in the raw digital signal data in MicroBooNE. I will then describe a novel drifted-charge extraction method based on 2D deconvolution technique. These techniques significantly enhance the performance of the induction wire planes in MicroBooNE.

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