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dQ/dx Calibration of the ICARUS detector using Through-going Muons[1] BISWARANJAN BEHERA, Colorado State University, ICARUS COLLABORATION — Through going muons are muon tracks which travel a substantial distance in the detector volume and then exit. They typically are cosmic muons hitting the detector, as ICARUS is on surface, or muons produced by neutrino interactions in the rock surrounding the ICARUS modules. Through-going muons have an approximately uniform energy deposition in liquid argon, and therefore provide a very useful calibration tool. Due to various detector effects, dQ/dx (the charge collected or induced on the wires per unit track length) is not always exactly proportional to the energy ionization density dE/dx. This talk will report on the current progress towards calibration and correction of these detector effects by using through-going muons, with the goal of accurately measuring dE/dx.

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