Abstract Submitted
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Diamond Muon Monitors for DUNE[1] KERRIE DOCHEN, University of Colorado at Boulder, DEEP UNDERGROUND NEUTRINO EXPERIMENT COLLABORATION — The Deep Underground Neutrino Experiment is currently in development, and is scheduled to begin taking data in the mid 2020s. This experiment will have better sensitivity toCP violation, mass hierarchy, and mixing angles thanany neutrino experiment built to date. There will be a number of important beam monitoring systems which will track beam stability and intensity and monitor the muonflux. The muon fluxcan give information about the neutrino flux, generated primarily by pions decaying into muons and neutrinos.The detector system will comprisea series of diamond solid state ionization detectors whichwill measure the spatial distribution of muons. Development of this detector system involves buildingand testing prototype detectors, testing commercial detectors, and developingand running a simulation to compare with the detector signals. This talk will focus primarily on test data from the commercial detectors, and in particular theirstability and long-term behavior.

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