

Abstract Submitted
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Electric Field Simulations for Proto-DUNE Field Cage Components MATHEW RAPP, Univ of Texas, Arlington, DUNE TEAM — The Deep Underground Neutrino Experiment (DUNE) is an international project hosted by Fermilab. The objective of DUNE is to study neutrino oscillation properties, as well as the 40kt Liquid Argon Time Projection Chamber (LArTPC). There are two current prototypes of the LArTPC which are being prepared for testing at CERN. The LArTPC requires a uniform electric field within its active volume. This field is provided by the field cage, a cubic structure composed of insulative I-beams that support 98 aluminum profile rings. The properties of specific field cage components that have been manufactured can cause undesired changes in the electric field. To better understand how flaws on specific field cage components affect the electric field, simulations are conducted. The purpose of simulating the flaws is to understand how the active electric field can be affected, and identify any critical flaws in manufactured parts.

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