

Workshop on Forward Physics and QCD at the LHC, the future Electron Ion Collider and Cosmic Ray Physics



Contribution ID: 11

Type: **not specified**

Desing and simulation of a cryostat and a field cage for a LArTPC for test in DUNE Collaboration

Currently, the DUNE Collaboration is making several tests in small detectors with the components that will be used in the DUNE detectors to avoid and detect future problems in the massive detectors. In this talk, I show the design and simulation of the cryostat and HV system for a LArTPC to make tests of relevance in cool electronics and photodetection for the DUNE Collaboration.

The design of the cryostat is based in the ASME Code and the simulation of the heat transfer is made in COMSOL Multiphysics. The design of the field cage was made based on the results of the simulation for the shape and the uniformity of the electric field in the active Drift volume. I present the simulated physical results and an estimated quote to construct this cryostat and HV system.

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