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Properties of DUNE ND-GAr Readout Chambers¹ BRANDON KORB, University of Colorado, Boulder — To probe neutrino oscillation physics, the Deep Underground Neutrino Experiment (DUNE) will have a near detector at Fermilab followed by a far detector which will be 1300 km away. The near detector consists of several subdetectors, including a high-pressure gaseous argon detector (ND-GAr). The goal of this project was to understand the properties of the readout chambers taken from A Large Ion Collider Experiment (ALICE) when used in high-pressure P10 gas for applications in the DUNE ND-GAr. This study focused on the gain in the avalanche region and the sag of the anode wires. To achieve this goal, Garfield++ and MagBoltz were used to simulate the chamber configuration and gas properties. Results will be presented on the expected performance of this chamber geometry with the anticipated DUNE gas configuration.

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