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**Identifying Neutral Kaon Decays in the DUNE High-pressure TPC Near Detector System** SUSAN BORN, University of Colorado Boulder, THE DUNE COLLABORATION — The two major experimental components needed to measure neutrino oscillations are a far detector (FD), for oscillation measurements and a near detector (ND) for the un-oscillated neutrino spectra and to constrain systematic uncertainty. In the case of the Deep Underground Neutrino Experiment (DUNE), both the ND and the FD will utilize Liquid Argon Time Projection Chambers (LArTPCs). The ND will serve additionally to reduce the impact of imperfect neutrino-argon interaction models on data collected at the FD. This requires that the ND is a more capable detector than the FD. Thus, in addition to an LArTPC, the ND will contain a multi-purpose detector (MPD) to measure lower energy neutrino interactions on Ar than could be obtained with an LArTPC alone. The MPD will be a magnetized system containing a High-Pressure Gaseous Argon TPC (HPgTPC) surrounded by an ECAL. Reconstruction and simulation of experimental data in the HPgTPC will be performed with GArSoft, a simulation, reconstruction and analysis package under development for use with HPgTPCs. This talk will describe the HPGTPC and feature progress made towards demonstrating the capabilities of using neutral kaon decays for energy calibration of the detector.

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