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Measurement of parity violation in n+^{3}He$\rightarrow p + t$ CHRISTOPHER COPPOLA, Univ of Tennessee, Knoxville, N3HE COLLABORATION — The hadronic weak interaction remains the least well-understood of the weak interactions. (There are several models with effective degrees of freedom characterizing its spin and isospin dependence.) Measuring the strength of this interaction is difficult due to the much larger strong interaction between nucleons. However, parity violation in few-body reactions allows isolation of weak contributions on the order of 10^{-7} from the strong background. The parity violating asymmetry in the reaction n+^{3}He is measured with a 3He target in the polarized pulsed neutron beam at the Spallation Neutron Source at Oak Ridge National Laboratory. It is necessary to calculate the proper geometry factors for this target chamber in order to extract the physics asymmetry from individual ion chamber signals. These factors are determined using a Monte Carlo simulation of the target chamber which includes effects due to correlations between different elements.

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