Abstract Submitted
for the APR16 Meeting of
The American Physical Society

Overview of the parity violation measurement of 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 multiple 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 size of parity violating asymmetry in the reaction n+^{3}He is expected to be of this order. The experiment has fininshed taking data from a ^{3}He target in a polarized pulsed neutron beam at the Spallation Neutron Source at Oak Ridge National Laboratory. The expected precision of the asymmetry calculations is on the order of 10^{-8}, and we are now in the analysis phase.

Christopher Coppola
Univ of Tennessee, Knoxville

Date submitted: 25 Feb 2016 Electronic form version 1.4