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Characterizing the Hadronic Weak Interaction with the n-3He Experiment at the Spallation Neutron Source JOSHUA HAMBLEN, University of Tennessee-Chattanooga, N-3HE COLLABORATION — The n-3He experiment aims to measure the hadronic weak interaction in the reaction $\vec{n}+{}^3\mathrm{He} \rightarrow {}^3\mathrm{H}+\mathrm{p}$. The correlation between the spin of the incident neutron and the momentum direction of the produced proton violates parity and is a clear signature of the weak force in a reaction that is dominated by the strong interaction. n-3He will take place in the Fundamental Neutron Physics Beamline at the Spallation Neutron Source at Oak Ridge National Laboratory upon the completion of the NPDGamma experiment in summer 2014. The objective is to measure the asymmetry to a precision of 10^{-8}. An overview of the experiment will be given, along with the physics goals, description of the subsystems, and schedule for installation and commissioning.

Joshua Hamblen
University of Tennessee-Chattanooga

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