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The overview and early measurements from the n3He experiment
GARISHVILI GARISHVILI, University of Tennessee, N3HE COLLABORATION
— The main goal of the n3He experiment at the Spallation Neutron Source (SNS) at ORNL is to perform a precise measurement of the parity violating (PV) weak amplitude of the reaction $\vec{n} + 3He \rightarrow T + p + 765$ KeV. In particular, the goal is to measure the spatial asymmetry of emitted protons with respect to the neutron spin direction. This asymmetry is expected to be very small ($< 10^{-7}$) since the NN interaction is dominated by the parity conserving (PC) strong amplitude. The final goal is to measure the asymmetry in the n3He experiment with an accuracy of $\sim 2 \times 10^{-8}$ to isolate the I=0 components of the hadronic weak interaction, which is vital for constraining weak coupling constants predicted by theory. The n3He detector was installed and commissioned in December 2014 on the Fundamental Neutron Physics Beamline at the SNS. Production data taking is expected to start by the end of January 2015 and planned to run until the end of 2015. The status of the experiment will be presented, including early data.

Irakli Garishvili
University of Tennessee

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