Abstract Submitted
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n3He: A Measurement of Parity Violation in the Capture of Cold Polarized Neutrons on He-3 MARK MCCREA, University of Manitoba, N3HE COLLABORATION — The n3He experiment which will run at the SNS aims to measure the parity violating asymmetry in the direction of proton emission from the reaction $\vec{n}(^3He, T)p$ where longitudinally-polarized cold neutrons are captured on unpolarized ^{3}He. The neutron spin direction will be reversed at 60 Hz in an 8 step sequence to control systematic effects. The maximum size of the proton asymmetry is calculated to be 3×10^{-7}. The goal of the experiment is to measure this asymmetry with precision of 2×10^{-8} to benchmark the predictions. The ^{3}He target serves as a combined target and ion chamber detector. For charge collection, the chamber has 16 signal and 17 HV wire frames, made from macor ceramic. Each signal wire, 9 wires per frame, are read out individually. I will present on the experiment and the target ion chamber.

Mark McCrea
University of Manitoba

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