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Measuring the target polarization for the Jefferson Lab Hall B Polarimeter¹ KATHERINE WILD, BRIAN RAUE, Florida International University — A significant portion of the CLAS12 physics program requires knowledge of the electron beam polarization, which is measured with a Møller polarimeter. The longitudinal component of the beam polarization is given by $P_B^z = \frac{A}{A_{zz}P_T^z}$, where A_{zz} is the Møller analyzing power, P_T^z is the target polarization, and A is the beam-spin asymmetry measured by detecting scattered electrons in coincidence after the beam strikes a polarized permendur target. To find the beam polarization, the polarization of the target must be known. We have used a bench-top apparatus consisting of solenoid coil to generate a polarizing field and a pickup coil surrounding the target material to measure the magnetization of the target when the solenoid field is reversed. In this poster we will present the details of our apparatus and analysis procedure along with results of measurements and the accompanying uncertainties. The total relative uncertainty in the target polarization is $\delta P_T^2/P_T^z \approx 0.02$.

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