# The $g_2^p$ Polarized Proton Target

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The recently completed $g_2^p$ experiment used a dynamic nuclear polarized (DNP) $NH_3$ target to investigate the spin structure of the proton at Jefferson Lab. The goal was to extract the proton's inclusive spin structure function at the lowest practical momentum transfer, $0.02 < Q^2 < 0.2\text{GeV}^2$, a $Q^2$ region unexplored prior to this experiment. The incident electron beam energy ranged from 1.1 to 3.3 GeV. Inclusive scattering from a transversely polarized target was detected at $5.6^o$ in a pair of magnetic spectrometers outfitted with a room temperature septum magnet. The deflection of the electron beam was minimized for a portion of the experiment by limiting the target magnetic field to 2.5 Tesla. Most DNP studies have been performed at 5 Tesla hence, polarization studies in this configuration are limited. Also of interest during the experiment was the measurement of the proton form factor ratio $G_E/G_M$, which required a longitudinal target field so a rotatable target chamber was needed to transition between settings. I will discuss the basic physical processes which drive DNP, and the unique instrumentation and design challenges that arose from running under the $g_2^p$ configuration. I will also present preliminary polarimetry results, and other performance indicators such as anneal time and polarization decay rates.