Abstract Submitted
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Elastic nucleon form factors at high momentum transfer and GPDs[1] GORDON D. CATES, University of Virginia, BOGDAN WOJTSEKHOWSKI, Jefferson Lab — Generalized parton distributions (GPDs) provide a description of nucleon structure that goes well beyond the longitudinal information contained in pdfs. Exclusive processes such as deeply virtual Compton scattering (DVCS) and deeply virtual meson production (DVMP) are critical to determining GPDs, and efforts to study these processes are ongoing. At present, however, the data from DVCS and DVMP are limited, and one of the strongest constraints on GPDs comes from the fact that the GPDs H^q and E^q, when integrated over Bjorken x, are simply related to the elastic Dirac and Pauli nucleon form factors (FFs) respectively. At Jefferson Laboratory (JLab), accurate measurements of the elastic nucleon FFs have become possible up to quite high values of momentum transfer, and these data have transformed our understanding of nucleon structure. The JLab Super Bigbite Spectrometer (SBS) program will continue this trend, greatly improving both the accuracy and momentum range with which the elastic FFs are known. We will review the current knowledge of the elastic nucleon FFs, the expectations of the SBS program, and the implications for our evolving knowledge of GPDs.

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