Abstract Submitted
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π^o Electroproduction and Transversity[1] SIMONETTA LIUTI, University of Virginia — Exclusive π^o electroproduction from the proton is suggested for extracting the tensor charge and other quantities related to transversity from experimental data [1]. A connection between a description based on partonic degrees of freedom, given in terms of Generalized Parton Distributions (GPDs), and Regge phenomenology is discussed. Pion electroproduction is described in terms of the chiral odd (spin flip) GPDs for both longitudinal and transverse virtual photon polarizations. A mechanism for the Q^2-dependence of the $\gamma^*\pi^o$ vertex is proposed that, by treating separately natural and unnatural parity exchanges at this vertex, allows one to separate the transverse and longitudinal virtual photon contributions, the latter being dominated by unnatural exchanges. A study of the sensitivity of different observables in both unpolarized and polarized scattering to both the tensor charge and the transverse anomalous magnetic moment [2], is presented with the aim of providing a practical method for extracting the latter. Future investigations using a variety of targets (proton, deuteron and ^{4}He) and probes – both electron and neutrino scattering as well as hadronic reactions will be discussed. [1] S. Ahmad, G. R. Goldstein and S. Liuti, arXiv:0805.3568 [hep-ph] [2] M. Burkardt, Phys. Lett. B **639**, 462 (2006).

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