Generalized Parton Distributions

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A brief introduction into the new physics of Generalized Parton Distributions (GPDs) and their representation as 3 dimensional objects will be given. GPDs can be accessed through lepton scattering processes such as Deeply Virtual Compton Scattering (DVCS) and Deeply Virtual Meson Production (DVMP). An important constraint for the extraction of GPDs is the dominance of the so-called handbag diagram in the description of polarization asymmetries and cross sections. First experimental results suggest that such conditions are met for DVCS in electron scattering at relatively low photon virtuality. Such conditions can be reached at existing accelerators such as JLab. An efficient experimental program requires measurements of polarization observables with high luminosity and with large acceptance detectors. Prospects for a GPD program at existing and planned machines will be discussed.