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On chiral-odd Generalized Parton Distributions

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The chiral-odd transversity generalized parton distributions of the nucleon can be accessed experimentally through the exclusive photoproduction process gamma + N -> pi + rho + N', in the kinematics where the meson pair has a large invariant mass and the final nucleon has a small transverse momentum, provided the vector meson is produced in a transversally polarized state. Estimated counting rates show that the experiment is feasible with real or quasi real photon beams expected at JLab@12 GeV and in the COMPASS experiment. (Phys Letters B688,154,2010)

In addition, a consistent classification of the chiral-odd pion GPDs beyond the leading twist 2 is presented. Based on QCD equations of motion and on the invariance under rotation on the light-cone of any scattering amplitude involving such GPDs, we reduce the basis of these chiral-odd GPDs to a minimal set.

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