

Abstract Submitted
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Compton scattering: from deeply virtual to quasi-real¹ YAO JI, ANDREI BELITSKY, Arizona State University, DIETER MLLER, Institut fr Theoretische Physik II, Ruhr-Universitt Bochum — We address the question of interpolation of the virtual Compton scattering process off a polarized nucleon target between the deeply virtual regime for the initial-state photon and its near on-shell kinematics making use of the photon helicity-dependent Compton Form Factors (CFFs) as a main ingredient of the formalism. We suggest a simple parametrization of the Compton hadronic tensor in terms of CFFs which are free from kinematical singularities and are directly related, at large photon virtualities, to Generalized Parton Distributions. We also provide a relation of our basis spanned by a minimal number of Dirac bilinears to the one introduced by Tarrach for the parametrization of the virtual Compton tensor and utilize the former to establish a set of equalities among our CFFs and Generalized Polarizabilities. As a complementary result, we express Compton scattering in the Born approximation in terms of CFFs as well.

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