Sam Van Thurenhout: Scale dependence of non-perturbative parton distributions

To gain a better understanding of the internal structure of hadrons, one can perform high-energy scattering experiments. Relevant processes include deep-inelastic scattering and deeply-virtual Compton scattering. Their theoretical description involves non-perturbative parton distribution functions, such as PDFs and GPDs, which relate properties of hadrons to those of their constituent partons. At the formal level, the distributions correspond to hadronic matrix elements of various QCD operators. This implies that the scale dependence of the distributions is set by the anomalous dimensions of the operators, which can be calculated perturbatively. In this talk, we discuss how the issue of operator mixing complicates such computations. We show that powerful consistency relations for the anomalous dimensions can be set up by analyzing symmetries of and relations between the operators at hand.