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Scale dependence of PDFs and GPDs: Anomalous dimensions from consistency relations

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The scale dependence of parton distributions, such as PDFs and GPDs, is set by the anomalous dimensions of composite operators and can be computed perturbatively. While in principle straightforward, in practice such calculations are often complicated due to operator mixing. In this talk, we show that powerful consistency relations for the anomalous dimensions, based on conjugations, can be set up by analyzing symmetries of and relations between the operators at hand. We explicitly discuss such relations for two types of mixing, namely mixing with gauge-variant (alien) operators and mixing with total-derivative operators in non-forward kinematics.

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