

XXVIII International Workshop on Deep-Inelastic Scattering and Related Subjects



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Understanding the proton mass in QCD

Thursday, 15 April 2021 08:00 (18 minutes)

Different decompositions (sum rules) for the proton mass have been proposed in the literature. All of them are related to the energy-momentum tensor in quantum chromodynamics (QCD). In this talk, we will provide an overview and a comparison of the various mass decompositions by highlighting recent developments. Special attention will be paid to the physical interpretation of the individual terms in the sum rules, and to the associated renormalized operators. This discussion includes the role played by the trace anomaly and the sigma terms. We will also present numerical results for the mass decompositions based on currently available information.

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