

Abstract Submitted
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Monitoring the Transition from Perturbative to Non-perturbative QCD through Parton-Hadron Duality¹ SIMONETTA LIUTI, University of Virginia — Parton-hadron duality, or the similarity between hadronic cross sections in the deep inelastic region and in the resonance region, encompasses a range of phenomena where one expects to observe a transmutation from partonic to hadronic degrees of freedom. A fully satisfactory theoretical description of this phenomenon, that became to be accepted as a “natural” feature of hadronic interactions, is still nowadays very difficult to obtain. In this contribution, by conducting an analysis of the most recent polarized and unpolarized inclusive electron scattering data, we present evidence that standard perturbative QCD approaches might not be adequate in order to describe parton-hadron duality. In particular, we unravel a discrepancy in the behavior of the extracted power corrections in the DIS and resonance regions, respectively.

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