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Compton amplitude and the nucleon structure functions from Lattice QCD

The structure of hadrons relevant for deep-inelastic scattering are completely characterised by the Compton amplitude. It is possible to directly calculate the Compton amplitude by taking advantage of the familiar Feynman-Hellmann approach applied in the context of lattice QCD. In principle, the x-dependent structure functions can be recovered from the amplitude or the amplitude itself can be incorporated to global QCD analyses. In this contribution, I will be highlighting QCDSF Collaboration's developments on computing the Compton amplitude and extracting the (moments of) structure functions.

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