Parton Distributions and Lattice Calculations (PDFLattice 2024)



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## **End to End Problem**

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Generalized parton distributions (GPDs) provide information about the internal structure of the proton, but GPDs do not enter cross sections directly; instead, they enter through, e.g., the Compton form factors (CFFs), which are the observables of deeply virtual Compton scattering (DVCS). Additionally, one of the most physically interesting quantities in hadron structure is the angular momentum that quarks and gluons contribute to the proton; angular momentum is extracted from an x-weighted integral of the GPDs –the second Mellin moment –and not the GPDs themselves. Hence, we propose a machine learning framework that allows us to construct a one-to-one map between CFFs, the observables of exclusive experiments, and Mellin moments.

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