

SCET Workshop 2022



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Finite- t and Mass Corrections in Deeply Virtual Compton Scattering

Thursday, 21 April 2022 11:30 (20 minutes)

In this talk, I will present our calculation of kinematic power corrections t/Q^2 and m^2/Q^2 to the amplitude of deeply-virtual Compton scattering to the twist-six accuracy.

Phenomenologically, this result reduces an important source of uncertainties in the QCD predictions for intermediate momentum transfers $Q^2 \sim 1 - 10 \text{ GeV}^2$, which are accessible in the existing and planned EIC experiments. In particular, the finite- t corrections are significant and must be taken into account in the data analysis.

Our calculation is carried out using techniques from conformal theory and the corresponding results are applicable to other processes involving light-ray operators.

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