

DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 140

Type: **Parallel talk**

The Compton amplitude and nucleon structure functions in lattice QCD

Thursday 30 March 2023 14:00 (20 minutes)

The structure of hadrons relevant for deep-inelastic scattering are completely characterised by the Compton amplitude. A direct calculation of the Compton amplitude provides a complementary way to accessing the structure functions, circumventing the operator mixing and renormalisation issues of the standard operator product expansion approach.

In this talk, we focus on the QCDSF/UKQCD Collaboration's advances in calculating the forward Compton amplitude via an implementation of the second-order Feynman-Hellmann theorem. We highlight our progress in investigating the moments of nucleon structure functions.

Submitted on behalf of a Collaboration?

Yes

Participate in poster competition?

Primary author: CAN, K. Utku (The University of Adelaide)

Presenter: CAN, K. Utku (The University of Adelaide)

Session Classification: WG 1

Track Classification: WG1: Structure Functions and Parton Densities