



Contribution ID: 83

Type: Oral Presentation

Double parton distributions in the nucleon on the lattice: Flavor interference effects

Thursday, 11 August 2022 10:20 (20 minutes)

Information about double parton distributions (DPDs) can be obtained by calculating four-point functions on the lattice. We continue our study on the first DPD Mellin moment of the unpolarized proton by considering interference effects w.r.t. the quark flavor. In our simulation we employ an $n_f = 2 + 1$ ensemble with inverse coupling $\beta = 3.4$, and pseudoscalar masses of $m_\pi = 355$ MeV and $m_K = 441$ MeV. The results are converted to the $\overline{\text{MS}}$ -scheme at the scale $\mu = 2$ GeV. We analyze the dependence of the considered Mellin moments on the quark polarization and compare our results with quark model predictions.

Primary author: ZIMMERMANN, Christian (CPT Marseille)

Presenter: ZIMMERMANN, Christian (CPT Marseille)

Session Classification: Hadron Structure

Track Classification: Hadron Structure