

Probing generalised parton distributions in exclusive meson-meson production

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In this talk, I will focus on an interesting subclass of 2 to 3 exclusive processes, in which a pair of light mesons of large invariant mass is produced through photoproduction. These processes provide access, at leading power, to both chiral-even and chiral-odd quark generalised parton distributions (GPDs), depending on the nature and on the polarisation of the mesons. For the final-state mesons, all combinations of ρ (both longitudinal and transverse polarisations) and π mesons are considered; however, those processes (e.g. exclusive $\pi^+\pi^-$ photoproduction) that are sensitive to two-gluon exchanges in the t -channel are excluded from our analysis since they have been shown to be inconsistent with a collinear factorisation approach due to the presence of pinched Glauber exchanges. Nevertheless, even after this restriction, a wide range of different channels remain available for study. Detailed results will be presented in the kinematics of JLab, COMPASS, LHC in UPCs, as well as at the upcoming EIC.

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