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Generalized Parton distributions of the kaon and pion within the nonlocal chiral quark model

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In this talk, we discuss the properties of generalized parton distributions (GPDs) for the kaon and pion within the framework of the nonlocal chiral quark model (NL χ QM). The valence quark GPDs of the kaon and pion are analyzed in detail with respect to their momentum fraction x and skewness ξ dependencies in the DGLAP and ERBL regions. Due to explicit chiral symmetry breaking, we observe a significant distortion of the kaon quark GPDs in the ERBL domain near $\xi = 1$, which affects the D-term of the kaon. Through polynomiality, we obtain the gravitational form factors of the kaon and pion, analyze them in detail, and compare them with results from other effective models.

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