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Distributions of Quarks and Gluons in the Pion and Kaon

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The pion and kaon occupy a special place in QCD as they are bound-states of a dressed-quark and a dressed-antiquark, but would also be massless in the chiral-limit because of dynamical chiral symmetry breaking (DCSB) in QCD. The structure of these Nambu-Goldstone bosons is therefore intimately tied to key questions in QCD, such as, the origin of hadron masses and color confinement. This talk will present recent results on the partonic structure of the pion and kaon obtained using the Dyson-Schwinger equations. Particular focus will be given to the properties of the pion and kaon as expressed by aspects of their light-front wave functions, and the connection of these properties to DCSB, examples include, parton distribution amplitudes and functions, form factors, TMDs and GPDs. Opportunities to measure aspects of this partonic structure at facilities such as Jefferson Lab and a future electron-ion collider will also be briefly discussed.

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