

Abstract Submitted
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The Valence-Quark Distribution of the Pion and Kaon¹ HUEY-WEN LIN, Michigan State Univ, JIUNN-WEI CHEN, Taiwan, Natl. Taiwan U., ZHOUYOU FAN, Michigan State Univ, JIAN-HUI ZHANG, Beijing Normal U., RUI ZHANG, Michigan State Univ — We present the first lattice-QCD calculation of the kaon valence-quark distribution functions using the large-momentum effective field theory (LaMET) approach, a method that has been applied to a wide variety of isovector nucleon distributions and valence pion distributions. This is the first such lattice calculation with multiple pion masses with the lightest one around 220 MeV, 2 lattice spacings $a=0.06$ and 0.12 fm. We find the valence-quark distribution of pion to be consistent with the FNAL E615 experimental results. Our ratio of the up quark PDF in the kaon to that in the pion agrees with the CERN NA3 experiment. We make predictions of the strange quark distribution of the kaon.

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