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Pion and Kaon Form Factors with Twisted Mass Fermions[1]

COLIN LAUER, MARTHA CONSTANTINOU, Temple University, CONSTANTIA ALEXANDROU, University of Cyprus and The Cyprus Institute, IAN CLOET, Argonne National Laboratory, GIANNIS KOUTSOU, KYRIAKOS HADJIYIANNAKOU, The Cyprus Institute, SIMONE BACCHIO, University of Cyprus, EXTENDED TWISTED MASS COLLABORATION COLLABORATION — In this talk we present results on the pion and kaon form factors and generalized form factors using numerical simulations within Lattice QCD. We employ the twisted mass fermion action for an Nf=2+1+1 ensemble with pion mass of 260 MeV. Main focus is given to the electromagnetic form factors, the quark momentum fraction, and the generalized form factors of the one-derivative unpolarized operator. Systematic errors due to excited states contamination are investigated and controlled using various analysis methods.

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