

QED corrections to Pion and Kaon decay constants

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Predictions for pion and kaon leptonic decay constants in Lattice QCD have reached sub-percent level precision. Since it is expected that isospin breaking corrections become important at this level of precision, further progress on the lattice requires inclusion of these effects. Given the phenomenological relevance for instance in CKM analyses this seems a worthwhile endeavour. In this talk I present RBC/UKQCD's efforts towards the computation of isospin breaking effects to leptonic decays of light mesons using a perturbative expansion in a stochastic, gaussian EM potential. We are currently focusing our efforts to design an efficient measurement strategy using Mobius domain wall fermions at physical quark masses. Our work is based on all-to-all propagators using low mode averaging. It is implemented in Hadrons, a new workflow management system based on the Grid Library.

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