

Determination of the charm quark mass from $N_f = 2+1$ QCD with Wilson fermions

Thursday, 6 August 2020 14:00 (20 minutes)

We have recently performed a determination of the charm quark mass on $N_f = 2+1$ CLS ensembles of non-perturbatively improved Wilson fermions. I will present the preliminary results of this analysis for the renormalization-group invariant charm quark mass and the ratio m_c/m_s on these ensembles. The extrapolation to the chiral and continuum limits is performed using 5 lattice spacings ranging roughly from 0.09 down to 0.04 fm and pion masses from 420 MeV to 130 MeV. The spatial extent of the ensembles is generally at least $4 / M_\pi$. In my talk, I will discuss the various analysis strategies we considered, including the fitting procedure, corrections for the correlations in the data, and the chiral-continuum extrapolation.

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