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Dual QCD and Kaon Flavour Physics

Monday, 6 August 2018 09:30 (30 minutes)

After recalling the basis of the Dual QCD (DQCD) and its past successes in Kaon flavour physics within the Standard Model, I will present 2018 results that include the calculation of hadronic matrix elements of four-quark operators for $K^0 - \bar{K}^0$ mixing and $K \rightarrow \pi\pi$ decays in arbitrary extension of the Standard Model. The results for $K^0 - \bar{K}^0$ mixing allow an insight into those from Lattice QCD and imply that the so-called meson evolution in DQCD is crucial for the understanding of lattice data. As no lattice QCD calculations of the hadronic matrix elements of 13 BSM four-quark operators contributing to $K \rightarrow \pi\pi$ are available we present the first to date calculation of these matrix elements in DQCD. Implications of these results for the ratio ϵ'/ϵ and its correlation with other Kaon observables are briefly discussed.

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