

Chiral transition in two-flavour QCD: an update

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Abstract: On the basis of our earlier investigations, we present an extended analysis of the chiral transitions in two-flavour QCD. The focus of the present work is twofold. First, the systematic uncertainties present in the data from past numerical simulations are checked against new Monte Carlo data generated using an exact RHMC algorithm. No significant deviations from old data are observed meaning that the systematics in old data were under control. Secondly, an explicit consistency check of the hypothesis that the transition is of the first order is performed based on a new set of MC simulations.