

QCD crossover at zero and non-zero baryon densities

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We will present new state-of-the-art lattice QCD results on the chiral crossover temperature of QCD for moderately large baryon chemical potential. Firstly, we will present a more precise updated result for the QCD pseudo-critical temperature at zero baryon chemical potential, obtained from all possible second-order chiral susceptibilities that diverge in the chiral limit. Then we will present new results on the QCD pseudo-critical temperature at non-zero baryon chemical potential, computed using Taylor-expansions of chiral condensate and chiral susceptibilities up to 6th-order in the chemical potential. Finally, we will present various second-order fluctuations along the QCD crossover line to look for possible signs of increased fluctuations with increasing baryon density.

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