

Heavy quark free energies and Debye screening masses at finite temperature and density

Presenter: Matthias Doring

M. Doring, S. Ejiri, O. Kaczmarek, F. Karsch, E. Laermann

Abstract: We study the free energies of heavy quarks calculated from Polyakov loop correlation functions in full 2-flavour QCD using the p4-improved staggered fermion action. A small but finite baryon number density is included via Taylor expansion of the fermion determinant in the baryo-chemical potential μ . For temperatures above T_c we extract Debye screening masses from the large distance behaviour of the free energies and compare their μ -dependence to perturbative results.