Lattice QCD with chemical potential: the properties of hadrons at the extreme conditions

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Abstract: The properties of hadron screening masses around the deconfinement phase transition at finite baryon density can be studied by evaluating the Taylor coefficients with respect to the iso-scalar and iso-vector chemical potentials. We simulate 2-flavour lattice QCD with staggered fermions and report investigations of nucleon, pseudo-scalar and vector mesons. We also discuss some of the issues related to the properties of hadron masses at finite chemical potential.