Quark Matter 2012



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QCD Critical Point: Marching towards continuum

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We simulate QCD with two light dynamical quarks on a 32^3 X 8 lattice by tuning the current quark mass such that the Goldstone pion mass is about

230 MeV. Earlier results of our Mumbai group corresponded to the same physical parameters but were on coarser lattices at respectively 1.33 times and twice the lattice cut-off (a) compared to these simulations, thus permitting us a march towards the continuum limit. Employing the

Taylor expansion method we had proposed earlier to estimate the radius of convergence of the series for the baryonic susceptibility, and using

up to eight order terms, we attempt to zoom in on the QCD critical point

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