Two-colour Lattice QCD with dynamical fermions at non-zero density versus Matrix Models

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Abstract: We provide first evidence that Matrix Models describe the low lying complex Dirac eigenvalues in a theory with dynamical fermions at non-zero density. Lattice data for gauge group SU(2) with staggered fermions are compared to detailed analytical results from Matrix Models in the corresponding symmetry class, the complex chiral Symplectic Ensemble. They confirm the predicted dependence on chemical potential, quark mass and volume.