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Phase diagram of QCD at finite isospin chemical potential with Wilson fermions

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We investigate the structure of the phase diagram of QCD at finite isospin chemical potential with Wilson fermions. From the behavior of meson correlators in temporal and spatial directions, Polyakov loop, isospin density and susceptibilities as a function of isospin chemical potential at zero and finite temperature, we extract the QCD phases at finite isospin chemical potential and temperature. We make comparison among our results, previous studies with effective theories, lattice QCD with KS fermions and high density QCD with heavy quark limit.

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