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Impact of finite volume on thermodynamic properties of quark matter within Polyakov quark meson model

Tuesday 13 December 2022 14:00 (1 hour)

We have explored the thermodynamics and phase structure of the Polyakov loop-extended three flavored quark-meson model at varying values of temperature and quark chemical potential. We have investigated the effect of finite volume on phase structure of QCD in transition from confined hadronic state to deconfined quarks. The PQM model has been modified by the inclusion of vector fields along-with the introduction of asymmetry by inducing isospin chemical potential. The phase boundary is found to shift towards the higher value of temperature and quark chemical with decreasing system size. The circumstantial study of such effects will have important implication in studying QCD phase diagram.

Session

Heavy Ions and QCD

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