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Dual QCD Quark hadron phase transition in presence of magnetic field

To gain a deeper insight into the dynamics of the quark-hadron phase transition under a magnetic field, the thermal characteristics of the non-perturbative QCD vacuum have been studied. The dynamic arrangement of the resulting dual QCD vacuum and its flux tube structure has been examined to investigate the non-perturbative features of QCD. The partition function of quarks and gluons in the QGP phase in the presence of a magnetic field in dual QCD structures is used to deduce various thermodynamical parameters, such as pressure, energy density, the square of speed of sound, specific heat and free energy using the grand-canonical partition function.

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