

Equation of state from lattice QCD at imaginary chemical potential and external magnetic field

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This report is devoted to lattice study of QCD equation of state (EOS) at finite baryon chemical potential and nonzero magnetic field. The simulations are performed with rooted dynamical staggered u , d , s quarks at physical quark masses. In order to avoid the sign problem, the study is carried out at imaginary chemical potential and the results are analytically continued to real chemical potential. In this report we present our preliminary results for the pressure and energy density for various values of temperature, chemical potential and magnetic field.

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