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QCD equation of state at finite baryon density with Cluster Expansion Model

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QCD equation of state at finite baryon density is studied in the framework of a Cluster Expansion Model (CEM), which is based on a fugacity expansion of the net baryon density.
CEM uses the leading two Fourier coefficients from lattice simulations at imaginary μ_B as the only model input. Excellent description of the available lattice data at both $\mu_B = 0$ and at imaginary μ_B is obtained. Questions regarding the radius of convergence of the Taylor expansion, the analytic structure of CEM, and the effective parameterization of QCD equation of state at finite μ_B are discussed.

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