

# Equation of state of QCD from analytical continuation

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We determine the 2+1 flavour equation of state of QCD at finite chemical potential to order  $(\mu_B/T)^6$  from lattice simulations. The simulations are performed at the physical mass for the light and strange quarks on several lattice spacings; the results are continuum extrapolated. The coefficients of the expansion in  $(\mu_B/T)$  are determined through the analytic continuation from imaginary chemical potentials of the baryonic density. Strangeness neutrality and charge conservation are imposed, to match the experimental conditions at heavy ion colliders. The pressure and interaction measure are calculated along the isentropic trajectories in the  $(T, \mu_B)$  plane corresponding to the RHIC Beam Energy Scan collision energies.

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