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Electric charge fluctuations using 4HEX quarks

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Fluctuations of conserved charges in a grand canonical ensemble can be computed on the lattice and, thus, provide theoretical input for freeze-out phenomenology in heavy ion collisions. Electric charge fluctuations and the corresponding higher order correlators are extremely difficult, suffering from the most severe lattice artefacts. We present new simulation data with a novel discretization where these effects are strongly suppressed and provide continuum extrapolated results in the temperature region of the chemical freeze-out.

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