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Critical endpoint of QCD in a finite volume

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We summarize recent results on the volume dependence of the location of the critical endpoint in the QCD phase diagram. To this end, we employ a sophisticated combination of Lattice Yang-Mills theory and a (truncated) version of Dyson-Schwinger equations in Landau gauge for 2 + 1 quark flavors. We study this system at small and intermediate volumes and determine the dependence of the location of the critical endpoint on the boundary conditions and the volume of a three-dimensional cube with edge length L. We also discuss quark number fluctuations in this setup. Additionally, we report on the chiral limit of the light quarks for different strange quark masses at vanishing chemical potential.

Presenter: BERNHARDT, Julian (Institute for Theoretical Physics, JLU Gießen)