

## Probing the QCD equation of state with fluctuations of conserved charges

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Fluctuations of conserved charges carry rich information about the fine details of the QCD equation of state. Recent lattice QCD data on high order baryon number susceptibilities are used here to constrain the excluded volume corrections in the hadron resonance gas model.

I will then address the question of comparison between experimental measurements of baryon and proton number fluctuations in heavy-ion collisions

and the corresponding grand-canonical thermal fluctuations from lattice QCD/excluded-volume HRG model, with a focus on effects of

global conservation laws, thermal smearing and difference between net proton and net baryon cumulants.

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