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## Exploring chiral symmetry restoration in heavy-ion collisions with fluctuation observables

*Monday 14 May 2018 16:30 (20 minutes)*

We study the critical properties of net-baryon-number fluctuations at the chiral restoration transition in a medium at finite temperature and net baryon density. The chiral dynamics of QCD is modeled by the Polykov-loop-extended Quark-Meson Lagrangian with the coupling of quarks to vector mesons. The Functional Renormalization Group is employed to properly account for the scaling properties of chiral observables at the phase boundary.

We focus on the properties of the net-baryon-number cumulants,  $\chi_B^n$  for  $n = 1$  up to  $n = 8$ , at and near the chiral phase boundary. We assess the influence of the location of the critical endpoint on the cumulant ratios and discuss the possibility to test non-equilibrium dynamics by comparing certain combination of baryon number susceptibilities.

The results are presented in the context of the recent experimental data of STAR and ALICE collaborations on fluctuation observables in heavy-ion collisions.

### Content type

Theory

### Collaboration

### Centralised submission by Collaboration

Presenter name already specified

**Authors:** ALMASI, Gabor (Wigner Research Center); FRIMAN, Bengt (GSI); REDLICH, Krzysztof (University of Wrocław)

**Presenter:** REDLICH, Krzysztof (University of Wrocław)

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