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Correlations generated by global baryon number conservation

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The search for the expected first-order phase transition between the hadronic matter and quark-gluon plasma and the corresponding critical endpoint is an active field of research. One of the main approaches to study this problem is based on fluctuations of e.g. net-baryon number, net-charge, or net-strangeness number measured in relativistic heavy-ion collisions. The cumulants are commonly used to quantify such fluctuations and correlations. However, the factorial cumulants are easier to interpret since they represent the integrated genuine multi-particle correlation functions. It is important to study the correlations originating from effects other than those related to the first-order phase transition. In this talk, the proton, antiproton, and mixed proton-antiproton factorial cumulants originating from the global baryon number conservation will be presented. Our results can be tested experimentally.

Is this abstract from experiment?

No

Name of experiment and experimental site

N/A

Is the speaker for that presentation defined?

Yes

Details

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<https://www.agh.edu.pl/en/>
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Internet talk

No

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