



Contribution ID: 151

Type: **Talk**

Overview of STAR Measurements on Correlations and Fluctuations

Wednesday 28 August 2024 17:20 (20 minutes)

Heavy-ion collisions with the RHIC Beam Energy Scan II (BES-II) program at STAR provided a unique opportunity to explore the QCD phase diagram at finite baryon density. Conserved charge fluctuations are believed to be sensitive to the QCD phase structure. In this talk, we will present the recent STAR highlights on fluctuation studies in search of the critical endpoint in QCD phase transition using the (net-)proton high-order moments. Besides, the multi-particle momentum correlations can be used to explore the collision dynamics (emission source size) and the final state interactions. The measurements of femtoscopic correlations of particle pairs including π - π , K - K , p - p , p - d , d - d , p - Λ , p - Ξ , and d - Λ will also be discussed.

Internet talk

Yes

Is this an abstract from experimental collaboration?

Yes

Name of experiment and experimental site

STAR Collaboration

Is the speaker for that presentation defined?

Yes

Details

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Session Classification: Heavy Ion Collisions and Critical Phenomena

Track Classification: Main topics: Heavy Ion Collisions and Critical Phenomena