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Type: Talk

System size analysis of the fireball produced in heavy-ion collisions

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Recently, a large amount of experimental data has been collected in high-energy physics for studying the properties of nuclear matter. The main interest is to study the phase diagram and localize phase transitions from hadronic to the quark-gluonic matter. There are different technics to study the hot matter. One of these is femtoscopy, which uses two-particle correlations to extract spatio-temporal characteristics of the emission source. Another approach is to obtain thermodynamic parameters from the momentum distributions of produced particles based on various theoretical models. In this research, we perform a comparative analysis of femtoscopic volumes and volumes obtained using the Tsallis statistical fit. This will allow us to estimate system size at the time of kinetic freeze-out and its dependence on collision centrality and energy. We observe that at high energies the volume values diverge significantly, while at low energies, they are more consistent. In the future, these results can help to combine these two different methods and get a more comprehensive picture of the fireball produced at the heavy ion collisions.

Internet talk

No

Is this an abstract from experimental collaboration?

No

Name of experiment and experimental site

N/A

Is the speaker for that presentation defined?

Yes

Details

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