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Type: Oral presentation

Energy dependence of particle production in Au+Au collisions at BES energies using A Multiphase Transport Model

Thursday 12 October 2023 14:50 (20 minutes)

High-energy heavy-ion collision experiments aim to explore the phase transition from normal hadronic matter to the quark-gluon plasma (QGP), a deconfined state of quarks and gluons. The dynamics of relativistic heavy-ion collisions at various collision energies have been extensively studied using A Multi-Phase Transport (AMPT) model. The AMPT model is very sensitive to the input parameters, therefore, the choice of these parameters are very important to explain the results from various experiments. This study aims to find the most suitable input parameters to understand particle production mechanism and bulk properties of the medium formed at different Beam Energy Scan (BES) energies at RHIC.

In this talk, we will present the transverse momentum spectra of identified hadrons in Au+Au collisions at $\sqrt{s_{NN}} = 7.7-200$ GeV obtained from AMPT model and compare it with the available experimental results. We will also present the energy dependence of particle yields (dN/dy), average transverse momentum ($\langle p_T \rangle$), particle ratios, and compare them with experimental data.

Is this abstract from experiment?

No

Name of experiment and experimental site

NA

Is the speaker for that presentation defined?

Yes

Details

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Internet talk

Yes

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