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Conserved number fluctuations under global rotation in a hadron resonance gas model

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Net-charge, net-strangeness and net-baryon number fluctuations measured in ultra-relativistic heavy-ion collisions may reveal details and insights into the quark-hadron transition, hadro-chemical freeze-out and possibly aid in the search of the QCD critical point. By controlling the collision energy, some current and upcoming heavy-ion facilities aim to study high energy nucleus-nucleus collisions in the finite net-baryon density regime where the effects of rapid global rotation are also expected to be strong for the peripheral collisions. We discuss the ratios of conserved number susceptibilities that are experimentally measurable via products of the moments of the corresponding distributions and compute the relevant theoretical results in the framework of a rotating hadron resonance gas (rHRG) model.

Category

Theory

Collaboration (if applicable)

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