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Rapidity window dependences of higher order cumulants of conserved charges

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We study the rapidity window dependences of higher order cumulants of conserved charges observed in relativistic heavy ion collisions. The time evolution and the rapidity window dependence of the non-Gaussian fluctuations are described by a simple model composed of Brownian particles.
We discuss that the rapidity window dependences of the non-Gaussian cumulants have characteristic structures reflecting the non-equilibrium property of fluctuations, which can be observed in relativistic heavy ion collisions with the existing detectors.
It is argued that various information on the thermal and transport properties of the hot medium can be revealed experimentally by the study of the rapidity window dependences, especially by the combined use, of the higher order cumulants.

On behalf of collaboration:

NONE

Primary author: KITAZAWA, Masakiyo (Osaka University)

Co-authors: ASAKAWA, Masayuki (Osaka University); SAKAIDA, Miki

Presenter: KITAZAWA, Masakiyo (Osaka University)

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