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Comparing Tsallis and Boltzmann temperatures in relativistic HICs at intermediate energies by

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A+A collisions at BES RHIC energies were generated in UrQMD and SMASH MC Models and compared with results in the box with periodic boundary conditions.
The comparison of pt spectra of different particles with Boltzmann and Tsallis distributions at different time slices has been done.
Our study indicates that - Tsallis distribution better matches the particle pT –spectra both for the matter in the cell and the infinite nuclear matter - UrQMD: parameter q varies from 1.02 to 1.15 for the cell and from 1.01 to 1.07 for the box calculations - SMASH: parameter q varies from 0.99 to 1.07 for the cell and is about □ ± □. □□ for the box calculations - qcell is close to qbox at lower energies for both models - at higher energies the agreement worsens - the Tsallis fit provides (a bit) lower temperatures than the Boltzmann fit both in the cell and in the box calculations.

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