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# Third-order viscous corrections to entropy four-current and relativistic hydrodynamics

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Using relativistic kinetic theory, a new expression that has been derived for the entropy four-current up to third order in gradient expansion will be presented. The effects of the higher-order entropy density in the case of Bjorken expansion will be discussed. It will be demonstrated that our results obtained using Chapman-Enskog like iterative solution of Boltzmann equation shows better agreement with the exact solution of Boltzmann equation and with the parton cascade BAMPS, as compared to the widely used Grad's method.

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