

Some applications of the Tsallis distribution in High Energy Collisions

We analytically investigate the thermodynamic variables of a hot and dense system in the framework of the Tsallis non extensive classical statistics in the massless and in the massive cases. Emphasis has been put on the method used to deal with the massive case where the cumbersome momentum integral has been replaced by the simpler ones. In addition to that, we study the effect of Tsallis Power Law distribution on the multi-particle production in the high-energy collisions. The effect of the Tsallis q parameter on the experimentally measurable nuclear suppression factor has been investigated and an attempt to describe the transverse momentum distribution of hadrons produced in high-energy collisions has been made.

I intend to submit my contribution for the proceedings

Yes

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