

# Transverse momentum distributions of Charm Meson in Relativistic Heavy-Ions Collisions studied through Non-Extensive Statistics

*Friday, 19 July 2024 20:40 (20 minutes)*

This presentation concerns the application of non-extensive statistics, more specifically that proposed by C. Tsallis, in the study of transverse momentum distributions of mesons composed of charm quarks produced in collisions between heavy ions at relativistic energies. Non-extensive statistics has been successful in the description of transverse momentum spectra of particles produced in hadronic collisions at high energies, that might be connected to the degree of equilibrium reached in these collisions. This question is particularly important for heavy quarks in collisions between heavy ions, given its role in the investigation of the medium formed in these collisions. We will present an update of previous results including the consideration of the transverse expansion of the medium, improving the interpretation of the systematic behavior of the  $q$  and  $T$  parameters regarding the dynamics of charm quarks in these collisions.

## Alternate track

### I read the instructions above

Yes

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