

Strangeness enhancement: possible evidence of Quark Gluon Plasma in pp collisions

Experimentally, the creation of Quark Gluon Plasma in relativistic heavy ion collisions is well known; its properties are being investigated in different experiments around the world at different energies. However, the results from proton-proton collisions are under debate since there are results with behavior like those observed in heavy ion collisions, for instance, collective phenomena, di-hadron correlations, and many others, but energy loss is not observed yet.

In this work we present an analysis of the enhancement of strangeness production as a function of multiplicity: different kinematic and global observables are studied using EPOS event generator. The results are obtained by simulating the creation of a dense medium, which evolves subsequently; the medium can be described by cascade or hydrodynamic models. Our results are compared to the experimental one, suggesting we can describe the data qualitatively. However, we still need more detail, which could require a better understanding of the models to get better knowledge and predictions of the physical phenomena.

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