

Collective effects in pp from pQCD and hydro approach

The fact that small systems created in high multiplicities pp collisions exhibit features very similar to those encountered in heavy-ion collisions has provoked a number of phenomenological works aimed at explaining the observed results. In this work we will present the result of two models that are fundamentally different. One is Pythia 8 that has proved to be able to reproduce many experimental features of LHC data using pQCD calculations, and complemented with phenomenological models like color reconnection, produces flow like effects. The other is EPOS that pictures the elementary parton-parton interactions as color flux tubes extended to the whole system, with shadowing and hydro evolution, as main ingredient to describe flow effects. The sensitivity of the two models to observables like: high momentum transverse momentum (p_T) spectra and the multiplicity dependence of mean p_T will be discussed using generated pp events at LHC energies.

Collaboration

Primary author(s) : Dr PAIC, Guy (Instituto de Ciencias Nucleares, UNAM)

Co-author(s) : ORTIZ, Antonio (Instituto De Ciencias Nucleares, UNAM); Dr CUAUTLE, Eleazar (Instituto de ciencias Nucleares, UNAM); Mr BENCEDI, Gyula (Wigner Research Centre for Physics, Hungarian Academy of Sciences, Budapest, Hungary); Mr BELLO, Hector (Benemerita Universidad Autonoma de Puebla); Mr IGA, sergio (Instituto de Ciencias Nucleares.UNAM)

Presenter(s) : Dr PAIC, Guy (Instituto de Ciencias Nucleares, UNAM)

Session Classification : Poster