

Università degli Studi di Trieste

Dipartimento di Fisica

Seminario

Xavier Artru

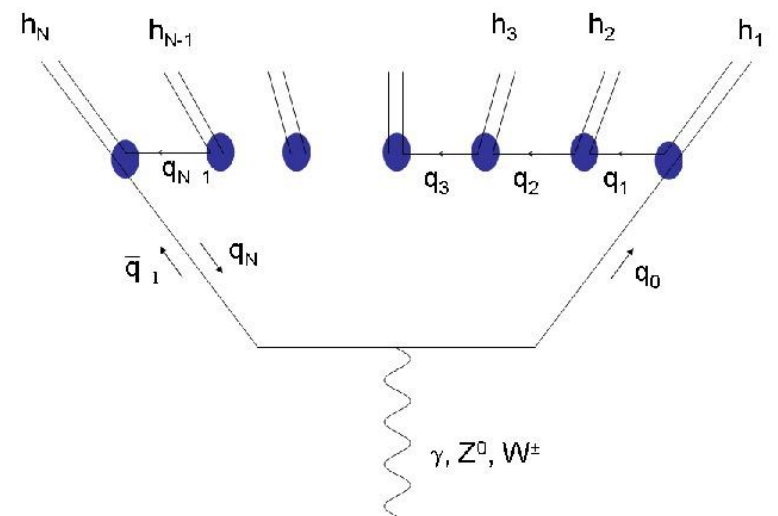
Institut de Physique Nucléaire de Lyon
CNRS/IN2P3 and Université Lyon-1

Nov 27, 3.30 PM - Lecture room A, F building, Dip. di Fisica – via Valerio 2 – Trieste

Including the quark spin degree of freedom in jet simulations.



Present Monte-Carlo simulations of events like PYTHIA take quark spin into account at the early stage of parton generation, but not in the hadronization stage. In particular they miss the Collins asymmetry which serves as a "quark polarimeter". I propose a method of introducing the quark spin degree of freedom in a recursive fragmentation model (more precisely, the "Lund symmetric" string fragmentation model). It takes into account the full quantum information carried by a spin. I will give some predictions concerning the Collins effect and a non-trivial transverse momentum correlation inside a jet.



Organizzazione a cura di: A. Martin, E. Vesselli