Thomas Becher Universität Bern

25.01.2011 Physikhochhaus Raum 815

"Drell-Yan production at small transverse momentum and the collinear anomaly"

The transverse momentum distribution of lepton pairs produced in the Drell-Yan process is arguably the most basic observable at hadron colliders. Nevertheless, at small transverse momentum q_T , this distribution has many intriguing features which are the subject of my talk. They include a breaking of the naive factorization of the cross section by a collinear anomaly, the presence of large logarithms as well as a strong factorial divergence in its perturbative expansion, and the emergence of an intermediate scale which suppresses nonperturbative effects at very small transverse momentum.