

The resummation of the low-phistar domain of Z production

Tuesday 9 April 2013 14:54 (12 minutes)

The presence of large logarithms in QCD corrections to observables spoils the validity of a calculation truncated at finite order and calls for an all-orders approach. The QT (transverse momentum) spectrum of massive lepton pairs, produced in hadron colliders by the Drell-Yan mechanism, has received a great deal of attention in electroweak phenomenology. We present and discuss a next-to-next-to-leading log (NNLL) resummed calculation of a related observable, namely phistar, that was recently introduced because of its distinct experimental advantages, but which is nonetheless sensitive to similar physics: soft-collinear gluon emission in the initial state. We also present various comparisons to collision data at Tevatron and the LHC.

Authors: BANFI, Andrea (University of Freiburg); TOMLINSON, Lee (University of Manchester (GB)); DAS-GUPTA, Mrinal (Manchester University); MARZANI, Simone (IPPP / Durham University)

Presenter: TOMLINSON, Lee (University of Manchester (GB))

Session Classification: Track 2

Track Classification: Parallel Track 2