Charmonia production at Tevatron, HERA and LHC

Miguel Angel Sanchis-Lozano

Valencia

May 16, 1998

Abstract

Charmonia hadro– and photoproduction is analized in the framework of the colour–octet model. We include initial–state radiation of gluons as a higher–order effect which could reconcile experimental data from Tevatron and HERA experiments. We review and compare non–relativistic QCD matrix elements showing agreement within experimental uncertainties. We extrapolate to LHC energies estimating the cross section of high–p_T muons from prompt charmonia as a background for the first level trigger of LHC experiments regarding the B physics programme.