

Dipartimento di Fisica Università di Cagliari INFN, Sezione di Cagliari



HIGH ENERGY PHYSICS COLLOQUIA

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QCD AT HIGH-ENERGY HADRON COLLIDERS

Abstract

Quantum Chromodynamics (QCD) is the gauge field theory of the strong interaction. This talk introduces QCD as a part of the Standard Model of Particle Physics and discusses its uses in investigations of fundamental interactions at high energies. It describes the conceptual bases of the principles of factorization which enable one to make theoretical predictions for strong-interaction scattering cross sections at high energies. It illustrates topical issues on QCD and resummation of perturbation series to all orders in the strong coupling, focusing on applications in heavy mass and jet production relevant for the LHC and for future high-energy experiments.

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