



量子物理学・ナノサイエンス第 223 回セミナー

QCD at the LHC: the high-energy frontier and the rise of multiple partonic interactions

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- 日程** : 4月13日(金) 16:00-
- 場所** : 本館2階 H284A 物理学系輪講室

概要

High-energy collisions produced by the Large Hadron Collider (LHC) provide the ultimate test to predictions of Quantum Chromodynamics (QCD). This talk presents a brief review of QCD measurements with LHC data. We will show how the LHC detectors' unprecedented coverage and precision are allowing physicists to exploit the data as never before. One particular feature we will be discussing is the role played by Multiple Partonic Interactions (MPI) at the LHC. Starting with the presentation of indirect evidences for MPI effects in global observables, we will then proceed to the presentation of direct measurements of the cross-sections for double partonic scattering. MPI are experiencing a growing popularity and are widely invoked to account for observations that cannot be explained otherwise. At the same time, the implementation of MPI effects in Monte Carlo generators is quickly evolving to include an increasing level of sophistication and complexity, which can have far reaching implications for LHC physics. In this talk we will also point at some interesting studies on the impact of MPI effects on the LHC physics program.

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