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Measurements of inclusive and differential Drell-Yan cross sections with the ATLAS detector (WG1)

Wednesday 13 April 2016 14:30 (12 minutes)

Precision measurements of the Drell-Yan production of W and Z/gamma*bosons at the LHC provide a benchmark of our understanding of perturbative QCD and probe the proton structure in a unique way.*
The ATLAS collaboration has performed high precision measurements at center-of-mass energies of 7TeV and 8TeV, integrated and as a function of the rapidity and the Z/gamma mass. New measurements at 7 TeV reach unprecedented accuracy in the resonance regions, while the 8 TeV measurements explore the high mass Z/gamma* domain. The measurements are compared to state-of-the-art calculations at NNLO in QCD, combined with various contemporary parton distribution functions and including higher-order electroweak effects. Strong constraints on the parton distribution functions are found.

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Track Classification: Structure Functions and Parton Densities