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Precision measurements of W and Z production at ATLAS

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Precision measurements of the production cross-sections of W and Z boson at LHC provide important tests of perturbative QCD and information about the parton distribution functions for quarks within the proton. This talk will present extraordinarily precise double-differential measurement of the Z boson transverse momentum and rapidity at a centre-of-mass energy of 8 TeV. From these results, the strong coupling constant is determined. Moreover, the transverse momentum of the W and Z boson measured from the hadronic recoil at 5 and 13 TeV are discussed. If ready, the talk concludes with a presentation of precision studies of the Drell-Yan process at low and high invariant mass.

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