

New Results on Z Boson Production with the ATLAS Detector

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Precision measurements of the Drell-Yan production of Z bosons at the LHC provide a benchmark of our understanding of perturbative QCD and electroweak processes and probe the proton structure in a unique way. ATLAS performed a precise triple differential Drell-Yan cross-section measurement as a function of M_{ll} , dilepton rapidity and $\cos\theta^*$ defined in the Collins-Soper frame at a center of mass energy of 8 TeV. We report on this measurement which provides sensitivity to PDFs and the Z forward-backward asymmetry, AFB. In order to test the electroweak sector with single Z boson final states, ATLAS has published a first measurement of the tau-polarization in Z events as well as the cross-section of the electroweak production of Z bosons at 13 TeV. These results will be presented and discussed.

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