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# Measurements of W, Z and Drell-Yan processes in ATLAS

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The study of the production of single W and Z bosons at the LHC, inclusive and in association with jets, provides stringent tests of the electroweak theory and perturbative QCD. The ATLAS experiment has measured the W boson production cross section and the W-boson charge asymmetry as a function of lepton rapidity in special LHC runs with reduced instantaneous luminosity at 5 and 13 TeV. Measurements of the charged- and neutral-current Drell-Yan cross section have been performed differentially up to high energies. Recent results by the ATLAS experiment of Z+jets production using a novel machine-learning approach to measure multi-differential cross sections of the kinematics of the Z boson decay products and the jets are presented. Measurements of W-boson production in association with a high-transverse momentum jet produced collinearly with the W boson are discussed. These measurements are compared to predictions from state-of-the-art perturbative QCD predictions and from MC generators, employing multi-jet matching and merging techniques.

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