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Measurements of W/Z production with the ATLAS detector

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W and Z boson production have been measured in the electron, muon and tau decay channels. Total and differential cross sections, defined in terms of the decay lepton kinematics, have been measured as a function of rapidity and transverse momentum. Ratios of the cross sections demonstrate sensitivity to lepton universality, and the kinematic distributions constrain parton densities and QCD calculations including resummations of soft gluon radiation, and the matching of NLO matrix elements or high multiplicity tree-level matrix elements to parton shower approximations. The polarisation of W bosons is also measured, as, for the first time, is the polarisation of the tau lepton in $W \rightarrow \tau \nu$ decays.

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