

XXIV International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS16)



Contribution ID: 35

Type: **not specified**

Measurements of inclusive W and Z cross sections at 13 TeV with the ATLAS detector (WG1)

Wednesday, April 13, 2016 2:45 PM (12 minutes)

Precision measurements of the Drell-Yan production of W and 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.

The ATLAS collaboration has performed these measurements at a center-of-mass energy of 13 TeV. Ratios of W and Z cross sections and of the W boson charges significantly reduce experimental uncertainties.

In addition, ratios of the cross sections for the production of single Z bosons and top-quark pairs have been derived at various center-of-mass energies.

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.

Primary author: Dr SHABALINA, Elizaveta (University of Gottingen)

Presenter: Dr PIRUMOV, Hayk (DESY)

Session Classification: WG1/WG3 joint session (EW+PDF)

Track Classification: Structure Functions and Parton Densities