



Contribution ID: 78

Type: **Parallel Session Talk**

Precision electroweak measurements with ATLAS

Tuesday, 9 April 2019 09:48 (26 minutes)

The electroweak sector of the Standard Model can be tested via precision measurements of fundamental observables. Measurements of the Drell-Yan production of Z bosons at the LHC provide a benchmark of our understanding of perturbative QCD and electroweak processes. The ATLAS collaboration has recently used such measurements to evaluate the effective leptonic weak mixing angle using data collected during the Run-1 of the LHC at a centre-of-mass energy of 8 TeV. The result is $\sin^2\theta_{\text{eff}}^l = 0.23140 \pm 0.00036$, yielding a precision similar to that of the recently published Tevatron legacy result and to the most precise individual observable measurements from lepton colliders. If available, measurements useful for a precise determination of the W boson mass will also be presented.

Primary author: ATLAS COLLABORATION

Presenter: ARMBRUSTER, Aaron James (CERN)

Session Classification: WG4: Hadronic and Electroweak Observables

Track Classification: WG4: Hadronic and Electroweak Observables