



HEP 2013  
Stockholm  
18-24 July 2013



Contribution ID: 216

Type: **Talk presentation**

## Electroweak measurements from W and Z/gamma\* properties with the ATLAS detector

*Thursday, 18 July 2013 09:00 (20 minutes)*

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. Precise measurements of W and Z production, including the polarisations of W bosons and of tau leptons produced in W decays are presented. They provide tests of lepton universality and constrain electroweak parameters. A measurement of the forwardbackward asymmetry for the neutral current Drell Yan process is also presented. The asymmetry is measured using dielectron and dimuon final states. For the dielectron channel, the measurement includes electrons detected in the forward calorimeter which extends the covered phase space to the region less sensitive to the PDF uncertainties. The result is then used to extract a measurement of the effective weak mixing angle.

**Primary author:** Prof. OREGLIA, Mark (University of Chicago (US))

**Presenter:** BELLOMO, Massimiliano (CERN)

**Session Classification:** Top and Electroweak Physics

**Track Classification:** Top and Electroweak Physics