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## Differential measurements of the Drell-Yan cross-sections at 8 TeV with the ATLAS detector

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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 a new precise triple differential cross-section measurement as a function of  $M(\ell\ell)$ , dilepton rapidity and  $\cos\theta^*$  defined in the Collins-Soper frame. This measurement provides sensitivity to the PDFs and the Z forward-backward asymmetry, AFB, which is derived and will be presented. This builds the foundation for a possible future extraction of the weak-mixing angle.

### Experimental Collaboration

ATLAS

**Presenter:** GLAZOV, Alexander (Deutsches Elektronen-Synchrotron (DE))

**Session Classification:** Top and electroweak

**Track Classification:** Top and Electroweak Physics