



Contribution ID: 39

Type: **not specified**

Measurements of the charge asymmetry in topquark pair production in the dilepton final state at $\sqrt{s}=8$ TeV with the ATLAS detector

Tuesday, 20 September 2016 19:00 (10 minutes)

Measurements of the top–antitop quark pair production charge asymmetry in the dilepton channel are presented using data corresponding to an integrated luminosity of 20.3 fb^{-1} from pp collisions at a center-of-mass energy of $\sqrt{s} = 8$ TeV collected with the ATLAS detector. Inclusive and differential measurements as a function of the invariant mass, transverse momentum, and longitudinal boost of the $t\bar{t}$ system are performed both in the full phase space and in a fiducial phase space closely matching the detector acceptance. Two observables are studied: $A(\ell\ell)$ based on the selected leptons and $A(t\bar{t})$ based on the reconstructed topquark pair final state. The inclusive asymmetries are measured in the full phase space to be $A(\ell\ell) = 0.008 \pm 0.006$ and $A(t\bar{t}) = 0.021 \pm 0.016$, which are in agreement with the Standard Model predictions.

Summary

Primary author: NARANJO, Roger (Deutsches Elektronen-Synchrotron (DE))

Presenter: NARANJO, Roger (Deutsches Elektronen-Synchrotron (DE))

Session Classification: Young Scientists Forum

Track Classification: Young Scientist Forum