

Abstract Submitted  
for the APR11 Meeting of  
The American Physical Society

**Measurement of  $W \rightarrow \ell\nu$  charge asymmetry in proton-proton collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector** VERENA MARTINEZ OUTSCHOORN<sup>1</sup>, Harvard University, ATLAS COLLABORATION — We present a measurement of the asymmetry in the production rates of positively and negatively charged  $W$  bosons in  $pp$  collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector. The  $W$  candidates are reconstructed in the  $\ell\nu$  final state, where  $\ell = e, \mu$ . In a sample corresponding to a total integrated luminosity of  $35 \text{ pb}^{-1}$ , the differential charge asymmetry as a function of the pseudorapidity  $\eta$  of the decay lepton is measured. The lepton charge asymmetry is compared to Standard Model predictions using different parton distribution function predictions.

<sup>1</sup>On behalf of ATLAS Collaboration

Jaehoon Yu  
University of Texas at Arlington

Date submitted: 13 Jan 2011

Electronic form version 1.4