Abstract Submitted
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Measurement of the W Boson Production Cross-Section in pp Collisions at 7 TeV with the ATLAS Experiment SRIVAS PRASAD[1], Havard University, ATLAS COLLABORATION — We present a measurement of the W boson cross-section in the electron and muon decay channels, using 7 TeV proton-proton collisions at the LHC. The dataset used in the analysis corresponds to an integrated luminosity of $35\,\mathrm{pb}^{-1}$, collected by the ATLAS detector during 2010. The major backgrounds come from $\mathrm{W} \to \tau\nu$, $\mathrm{Z} \to \mu\mu$ where a lepton is lost, and from QCD, particularly from heavy flavor decays. Lepton kinematic, isolation, missing energy and transverse mass criteria are adopted to extract the signal, and the cross-sections and kinematic distributions are compared with next-to-leading order Standard Model expectations.

[1]On behalf of ATLAS Collaboration

Jaehoon Yu
University of Texas at Arlington

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