

Abstract Submitted  
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**Measurement of  $W\gamma$  and  $Z\gamma$  production and limits on anomalous gauge couplings using  $pp$  collisions at  $\sqrt{s} = 7$  TeV** MIAOYUAN LIU, Duke University, ATLAS COLLABORATION — We describe a study made by the ATLAS collaboration of  $W\gamma$  and  $Z\gamma$  production from  $pp$  collisions at  $\sqrt{s} = 7$  TeV. The analysis is performed on a data sample with an integrated luminosity of  $1.0 \text{ fb}^{-1}$  collected during 2011 LHC data taking. The measurement uses W and Z bosons identified from leptonic decays (electrons and muons) with an associated high energy isolated photon. Production cross sections for  $p + p \rightarrow l\nu\gamma + X$  and  $p + p \rightarrow l^+l^-\gamma + X$  are measured in a fiducial phase space well covered by the ATLAS detector acceptance and are studied in several ranges of the transverse energy of the photon. The measured cross sections and production kinematics are compared to Standard Model predictions and used to determine limits on anomalous  $WW^*\gamma$  and  $Z(Z^*/\gamma^*)\gamma$  couplings.

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