

Abstract Submitted
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Searches for New Physics using $Z\gamma$ and $Z\gamma\gamma$ production at the LHC¹ AARON WEBB, Duke Univ, ATLAS COLLABORATION — High energy photons produced in association with Z bosons are measured using pp collisions at $\sqrt{s} = 8$ TeV. The analyses use a data sample with an integrated luminosity of 20.3 fb^{-1} collected by the ATLAS detector during 2013 LHC data taking. Events are selected using leptonic decays of Z bosons ($Z(e^+e^-, \mu^+\mu^-)$) with the requirement of an associated isolated photon with transverse energy greater than 15 GeV. The data are used to test the electroweak sector of the Standard Model and search for evidence of new phenomena. Further, the measurements are used to set limits on anomalous triple and quartic $Z\gamma$ and $Z\gamma\gamma$ gauge couplings.

¹The ATLAS Collaboration

Aaron Webb
Duke Univ

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