

Recent measurements of the $Z\gamma$ production with the ATLAS detector

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The production of Z bosons in association with a high-energy photon is studied in the neutrino decay channel of the Z boson using pp collisions at $\sqrt{s} = 13$ TeV. The analysis uses a data sample with an integrated luminosity of 36.1 fb^{-1} collected by the ATLAS detector at the LHC in 2015 and 2016. Candidate $Z\gamma$ events with invisible decays of the Z boson are selected by requiring significant transverse momentum (pT) of the dineutrino system in conjunction with a single isolated photon with large transverse energy (ET). The rate of $Z\gamma$ production is measured as a function of photon ET, dineutrino system pT and jet multiplicity. Evidence of anomalous triple gauge-boson couplings is seen in $Z\gamma$ production with photon ET greater than 600 GeV. No excess is observed relative to the Standard Model expectation, and upper limits are set on the strength of ZZ γ and Z $\gamma\gamma$ couplings.

Type

Parallel talk

Sessions (parallel only)

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