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Measurements of photon identification efficiencies with the 2015 and 2016 pp collision data in ATLAS at $\sqrt{s} = 13$ TeV

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This poster presents the techniques to measure the photon identification efficiencies in the ATLAS experiment, on the proton-proton collisions collected at $\sqrt{s} = 13$ TeV, with an integrated luminosity of 3.2 fb⁻¹ and 33.3fb⁻¹ corresponding to 2015 and 2016. Three independent analyses have been exploited. One uses photons from radiative $Z \rightarrow l\bar{l}\gamma$ decays. The second extracts the shower shape properties of electrons from $Z \rightarrow ee$ decays and extrapolates them to photons. The third directly measures the efficiency on samples of reconstructed photons, after determining and subtracting the hadronic background with a technique based on track isolation. The results from all analyses are then compared with each other and with the prediction from the simulation.

Summary

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