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The ATLAS Electron and Photon Trigger

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Electron and photon triggers covering transverse energies from 5 GeV to several TeV are essential for signal selection in a wide variety of ATLAS physics analyses to study Standard Model processes and to search for new phenomena. Final states including leptons and photons had, for example, an important role in the discovery and measurement of the Higgs boson. Dedicated triggers are also used to collect data for calibration, efficiency and fake rate measurements. The ATLAS trigger system is divided in a hardware-based Level-1 trigger and a software-based high-level trigger, both of which were upgraded during the LHC shutdown in preparation for Run-2 operation. To cope with the increasing luminosity and more challenging pile-up conditions at a center-of-mass energy of 13 TeV, the trigger selections at each level are optimized to control the rates and keep efficiencies high. To achieve this goal multivariate analysis techniques are used. The ATLAS electron and photon triggers and their performance with Run 2 data will be presented.

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