

# Final Performances for electron and photon calibration reconstruction and identification at ATLAS

*Friday 19 July 2024 19:55 (20 minutes)*

At the LHC, Electrons and Photons play a crucial role for precision measurements of the Higgs Bosons properties as well as of Standard Model parameters such as the weak mixing angle, the W boson mass and related cross-sections which have proven to be competitive to prior determinations at the LEP or Tevatron colliders. In addition, they are crucial for searches using electron and photon final states, such as the search for Di-Higgs production or beyond the Standard Model multilepton final states. These challenging measurements rely on understanding and controlling the systematic uncertainties of the object reconstruction in the detector extremely well. In this poster, the final precision on electron and photon energy calibration, reconstruction, identification and isolation efficiencies measurements using 13 TeV pp collision data collected with the ATLAS detector during the LHC Run-2 will be discussed. A glance at preliminary Run-3 results will be included.

## Alternate track

### I read the instructions above

Yes

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**Session Classification:** Poster Session 2

**Track Classification:** 12. Operation, Performance and Upgrade (incl. HL-LHC) of Present Detectors