

Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Algorithm design and expected performance for ATLAS Run-3 Level-1 calorimeter trigger system AVA MYERS, TAE MIN HONG, BENJAMIN CARLSON, University of Pittsburgh, ATLAS COLLABORATION — In Run 3 of the LHC (2021-2024), the Level-1 trigger system of the ATLAS Experiment will introduce three feature extractors (FEX): eFEX for electron/photon, jFEX for jets/MET, and gFEX for global quantities. The increased calorimeter granularity is useful for all physics channels that deposit energy in the calorimeter, from high-bandwidth items like electrons to MET (missing transverse momentum). An overview of the hardware implementation will be discussed. Details of the algorithm design will be presented, along with the projected performance for electron/photon, jet, and MET triggers.

Ava Myers
University of Pittsburgh

Date submitted: 05 Jan 2021

Electronic form version 1.4