Abstract Submitted for the TSF12 Meeting of The American Physical Society

Electron Identification Studies for the Level 1 Trigger Upgrade LAST FEREMENGA, University of Texas at Arlington, MARC-ANDRE PLEIER, FRANCESCO LANNI, Brookhaven National Laboratory, ATLAS COLLABORA-TION — We show that it is not possible to reject neutral pions from electrons at Level 1 trigger of the ATLAS trigger system. The lateral profiles of electrons and neutral pions are different when the interaction point of the colliding protons is at z = 0 and a good rejection criteria is achieved. Although this rejection criteria is stable against increasing pileup, it fails for a more realistic model of the luminous profile of the proton beam. A variable used at Level 2 trigger is also shown in this note to be unstable against increasing pileup.

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Date submitted: 12 Oct 2012

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