

Discriminating Between Direct Photon and Neutral Pion Triggers Using Multilayer Perceptrons

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Abstract

Direct photon and neutral pion triggers indicate different kinematics in an event. Discrimination between direct photon and neutral pion triggers allows for the comparison of different jet populations. Machine learning techniques have been introduced as a useful tool to classify trigger particles. The purpose of this research is to use the TMultiLayerPerceptron class in the ROOT programming language to discriminate between direct photons and neutral pions using transverse shower profile and other trigger particle information. The techniques and findings of the implementation of the TMultiLayerPerceptron class will be documented throughout this study.