Contribution ID: **21** Type: **Poster**

Flavor Tagging TeV Jets for BSM and QCD

Monday, 5 October 2015 18:40 (5 minutes)

We present a new scheme for tagging b-jets with p_T > 500 GeV called “mu_x tagging.” At the LHC, the primary method to tag b-jets relies on tracking their charged constituents. However, when highly boosted, track-based b-tags lose efficiency, and the probability to mistag light jets rises dramatically. Using muons from B hadron decay and defining a particular combination “x” of angular information and boost estimation, we find fairly flat efficiencies to tag b-jets, c-jets and light-jets of e_b = 14%, e_c = 6.5%, and e_light = 0.65%, respectively. We demonstrate the usefulness of this new scheme by showing the reach for discovery of a leptophobic Z’ in the dijet channel.

Primary author: Prof. SULLIVAN, Zack (Illinois Institute of Technology)

Co-author: Mr PEDERSEN, Keith (Illinois Institute of Technology)

Presenter: Prof. SULLIVAN, Zack (Illinois Institute of Technology)

Session Classification: Poster session

Track Classification: High Energy and High Pt Interactions