STUB WINDOW TUNING

(NEW TUNE CHECK IN CMSSW_13_3_0)

L1 Track Algorithm (FW+SW) meeting

7 NOV 2023

Reza Goldouzian, Mike Hildreth and Austin Townsend

UNIVERSITY OF
NOTRE DAME

Efficiencies

Ttbar with PU200 (tight tune)

efficiency for |eta| < 1.0 = 95.1118 +- 0.0614271
efficiency for 1.0 < |eta| < 1.75 = 94.2469 +- 0.0898606
efficiency for 1.75 < |eta| < 2.4 = 95.074 +- 0.114263
combined efficiency for |eta| < 2.4 = 94.8491 +- 0.0464707 = 214580/226233

efficiency for pt > 2 = 94.8491 +- 0.0464707
efficiency for 2 < pt < 8.0 = 95.0439 +- 0.0526649
efficiency for pt > 8.0 = 94.2625 +- 0.0979235
efficiency for pt > 40.0 = 93.2122 +- 0.38887

TP/event (pt > 2) = 153.927
TP/event (pt > 3.0) = 51.4113
TP/event (pt > 10.0) = 4.5791
tracks/event (pt > 2) = 166.496
tracks/event (pt > 3.0) = 58.0397
tracks/event (pt > 10.0) = 5.8297

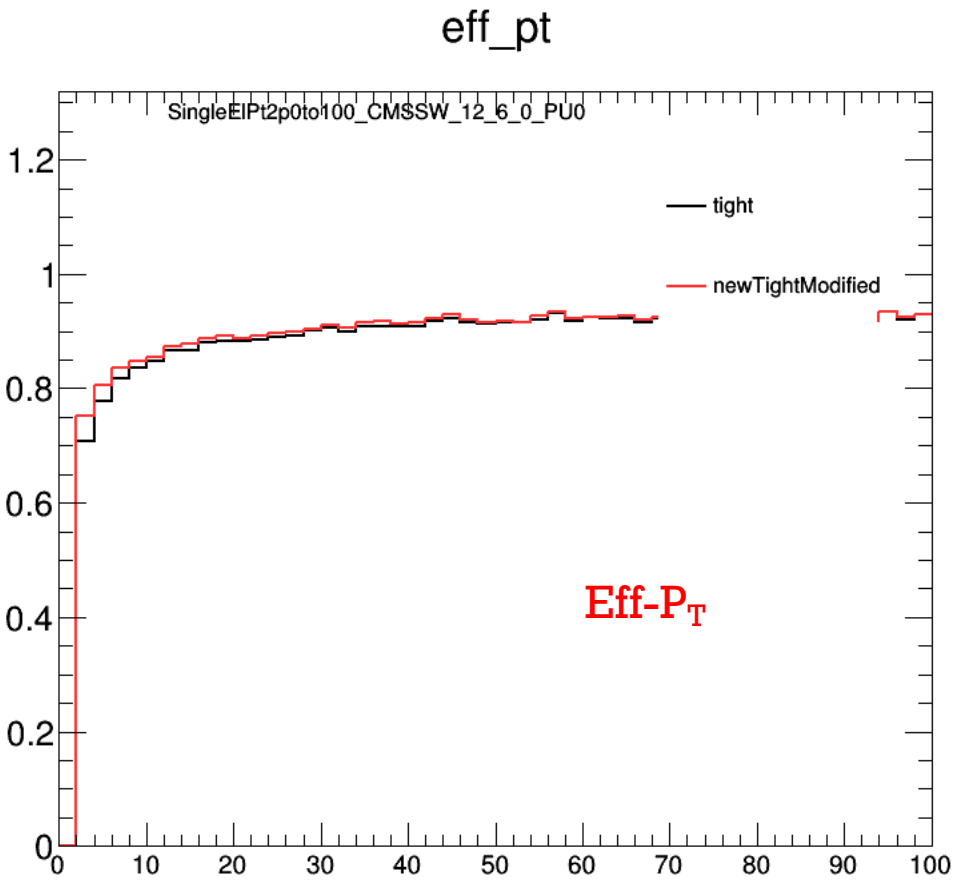
Ttbar with PU200 (new tune)

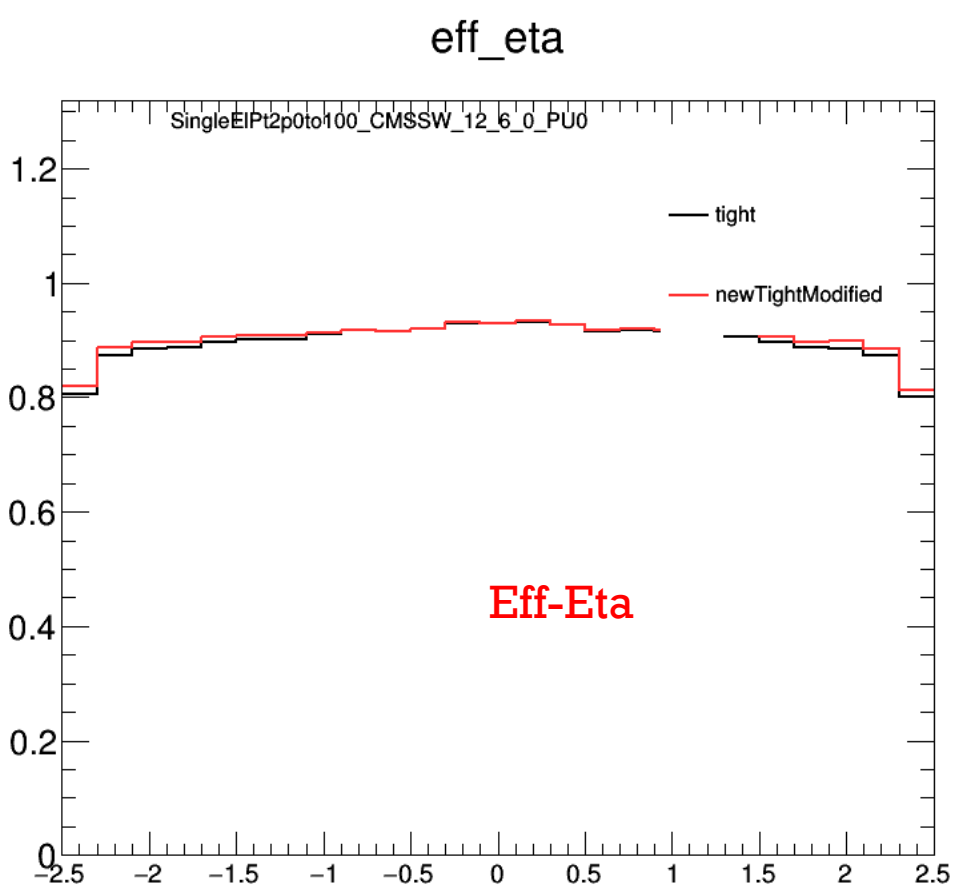
efficiency for |eta| < 1.0 = 95.2151 +- 0.0608786
efficiency for 1.0 < |eta| < 1.75 = 94.4558 +- 0.0884518
efficiency for 1.75 < |eta| < 2.4 = 95.5338 +- 0.109168
combined efficiency for |eta| < 2.4 = 95.0404 +- 0.0457029 = 214473/225665

efficiency for pt > 2 = 95.0404 +- 0.0457029
efficiency for 2 < pt < 8.0 = 95.1305 +- 0.052306
efficiency for pt > 8.0 = 94.7699 +- 0.0937896
efficiency for pt > 40.0 = 93.5901 +- 0.378793

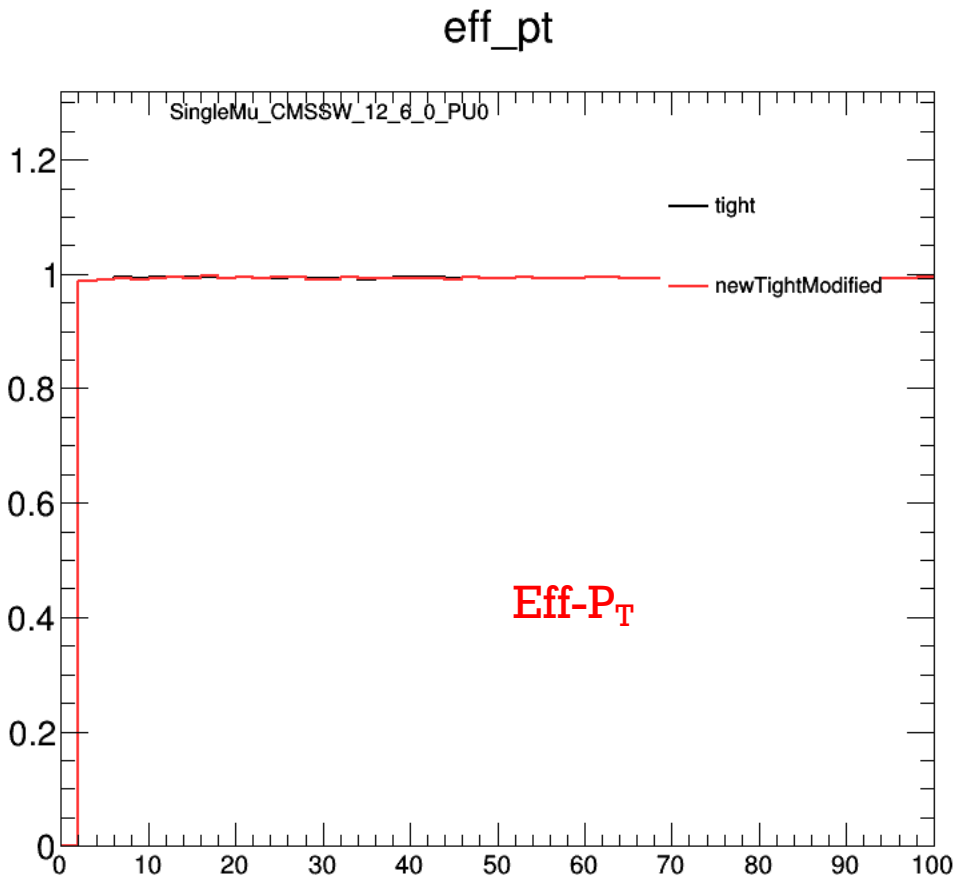
TP/event (pt > 2) = 153.324
TP/event (pt > 3.0) = 51.3457
TP/event (pt > 10.0) = 4.5751
tracks/event (pt > 2) = 164.797
tracks/event (pt > 3.0) = 57.876
tracks/event (pt > 10.0) = 5.831

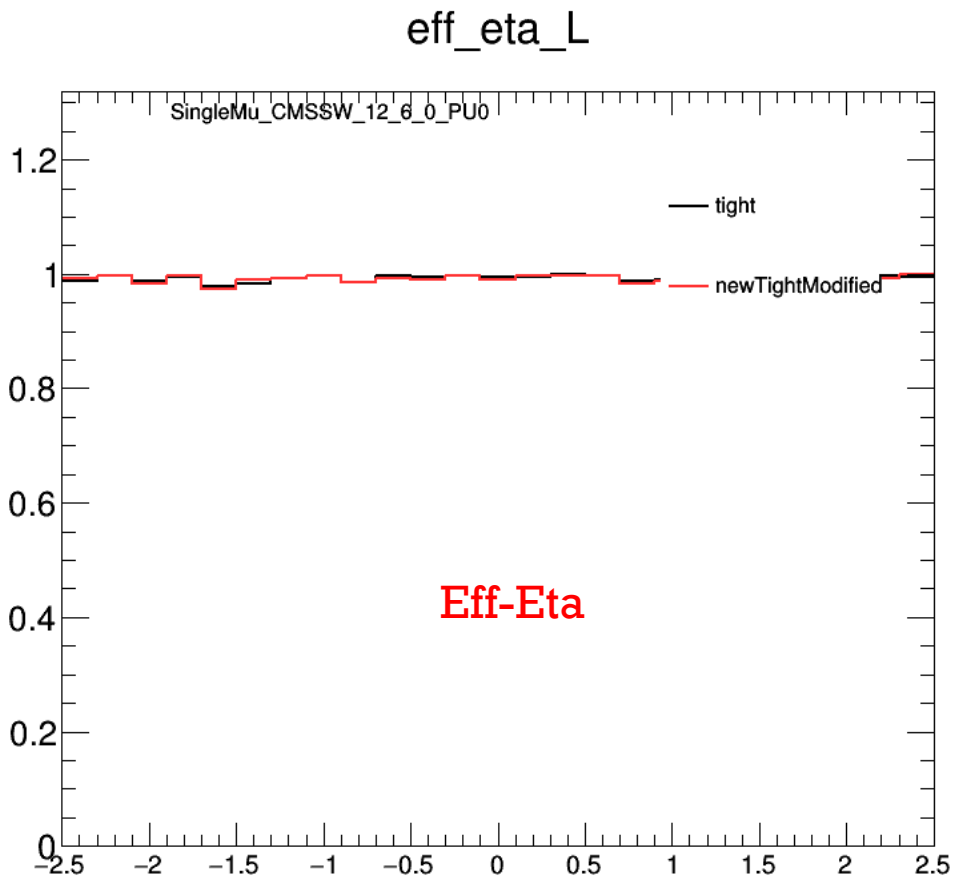
Single electron sample





Single muon sample





Ttbar sample