Status update

Beam-background for tracking

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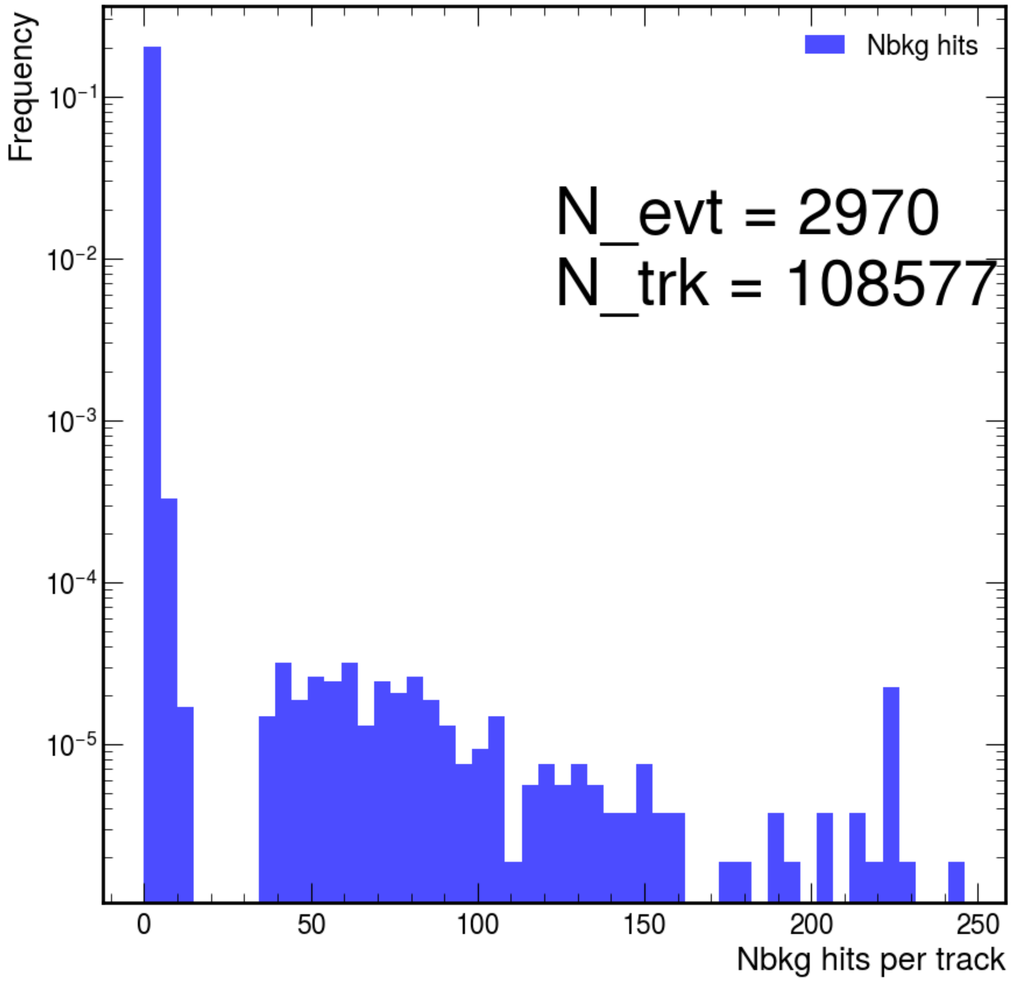
Overview

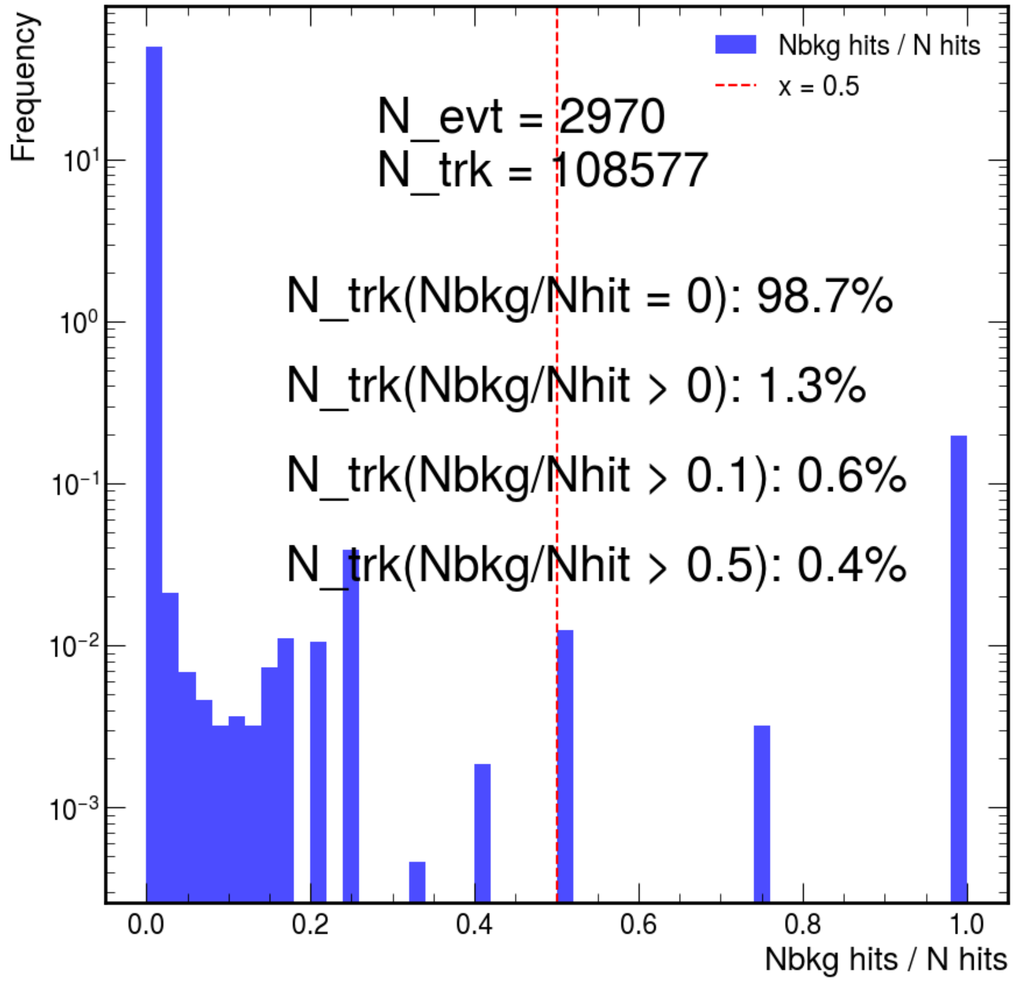
- The impact of beam-background at track-level is negligible
  - Background contaminates signal tracks with single hit
  - Tiny effects on signal track efficiency/purity

- Move to the event-level
  - Pure background track in signal events

Baseline mixing configuration used

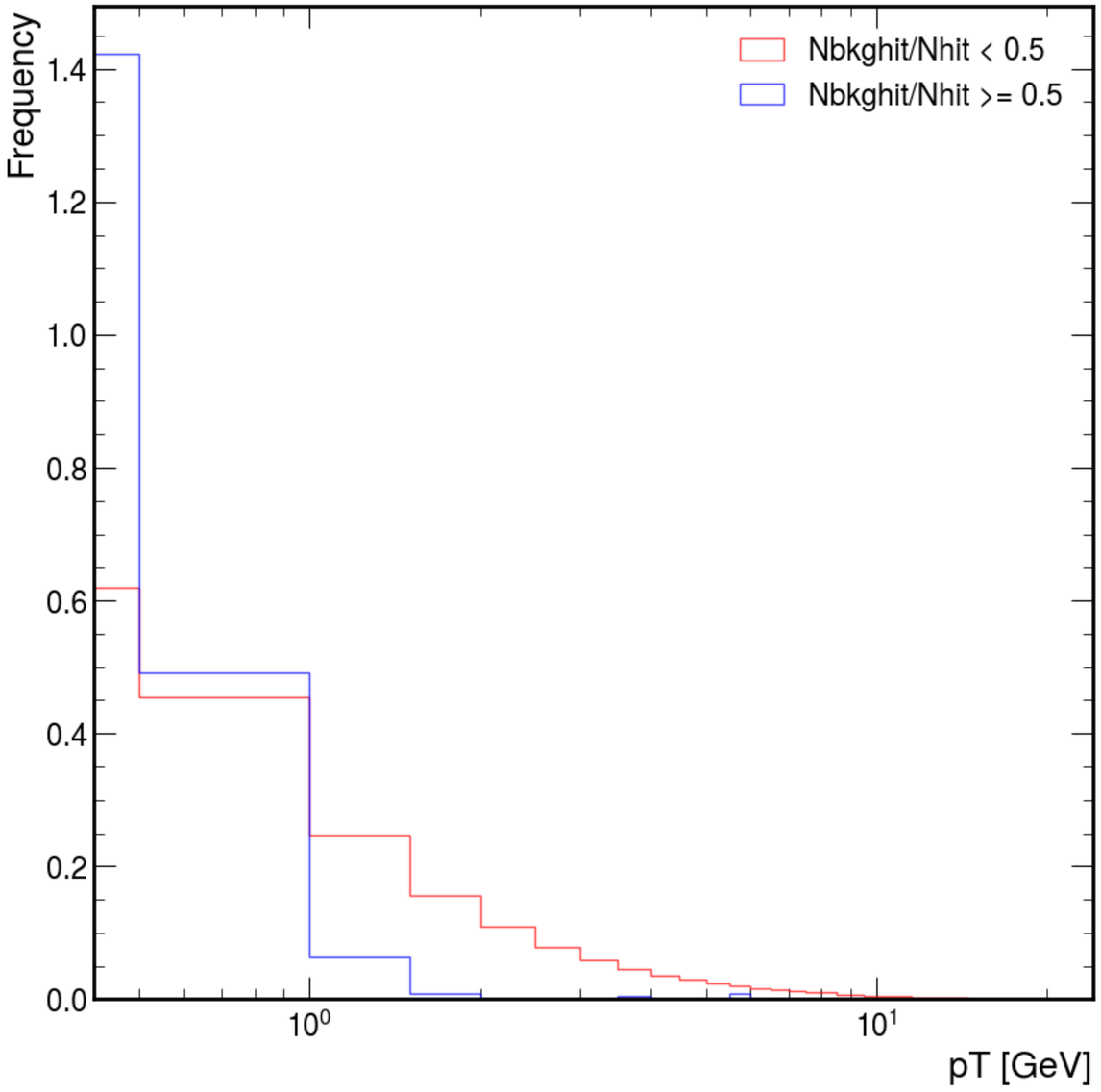
nnHgg +BKG

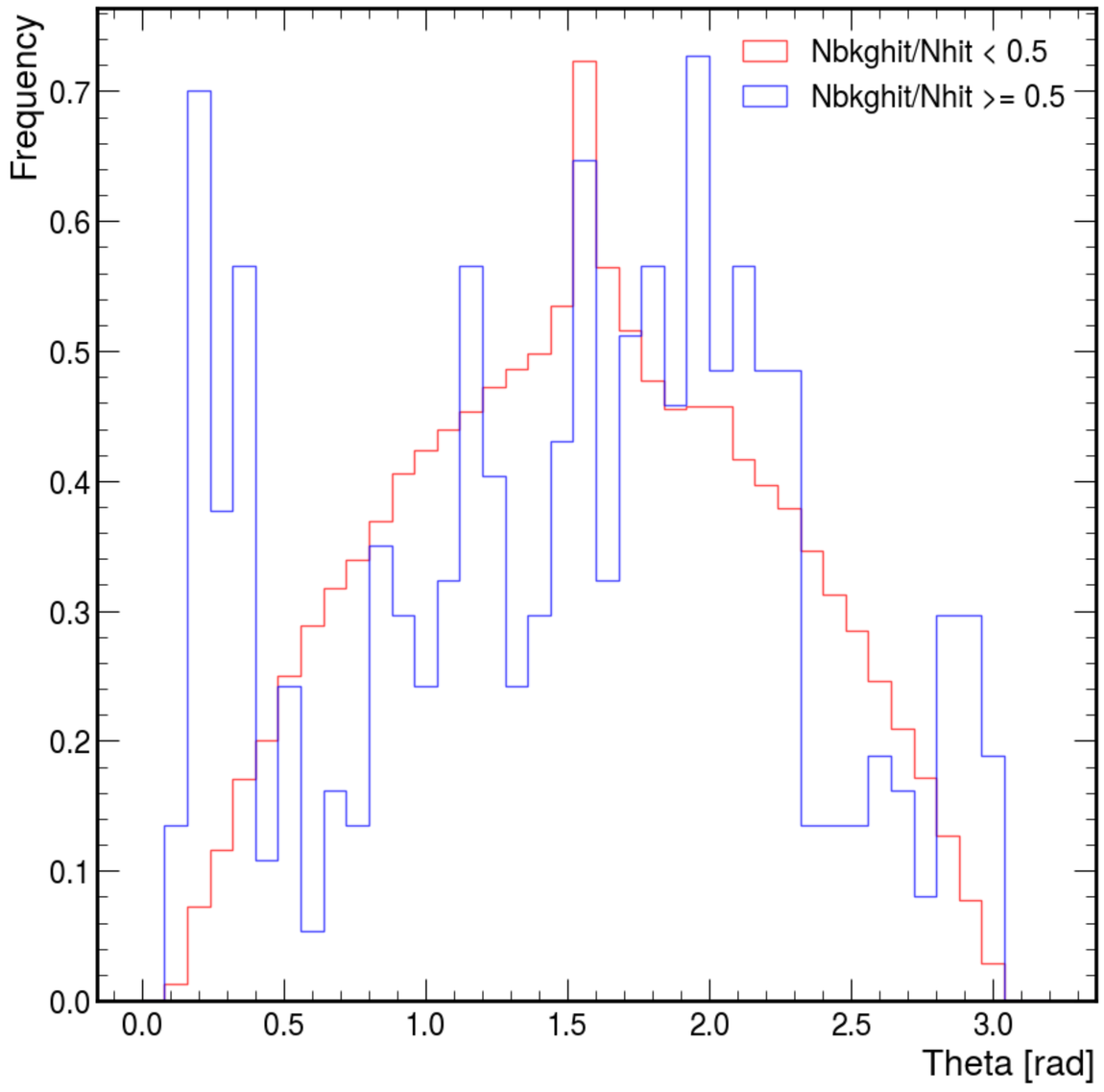




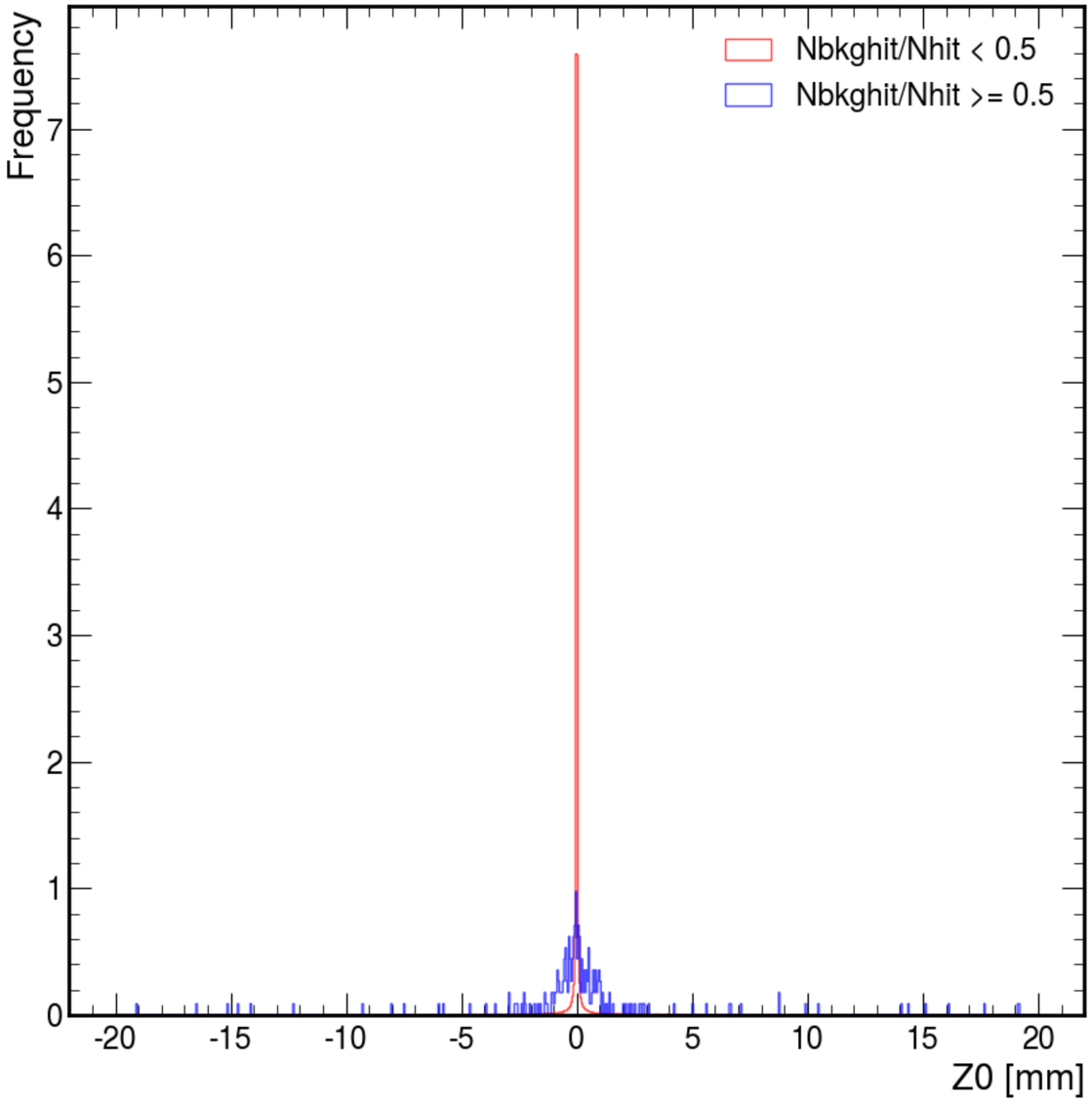
- 1% x 108577 / 2970 ~ 0.3
- On average, there is one background track for every 3 events

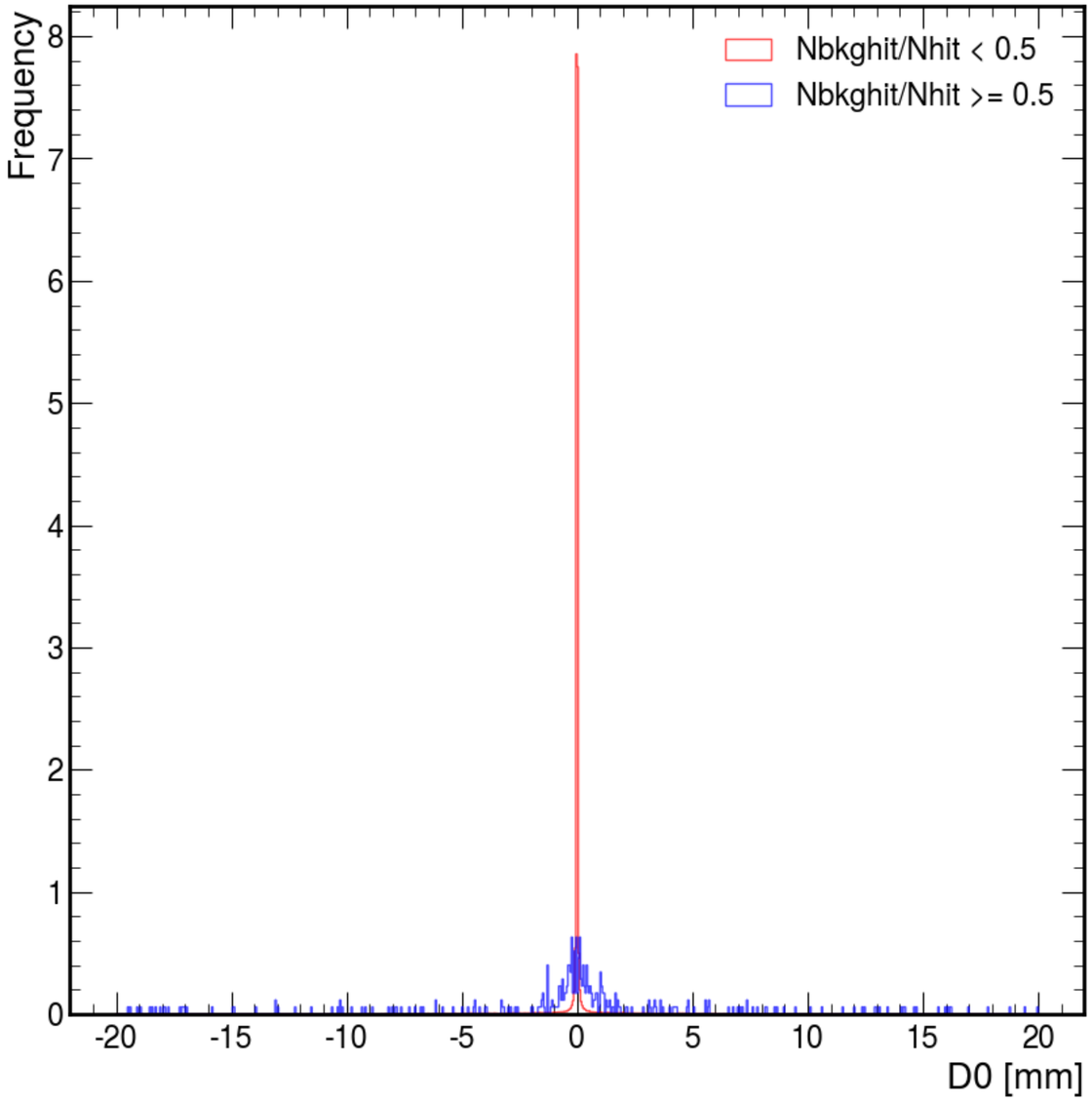
nnHgg +BKG


Frequency
Nbkghit/Nhit < 0.5
Nbkghit/Nhit >= 0.5
pT [GeV]

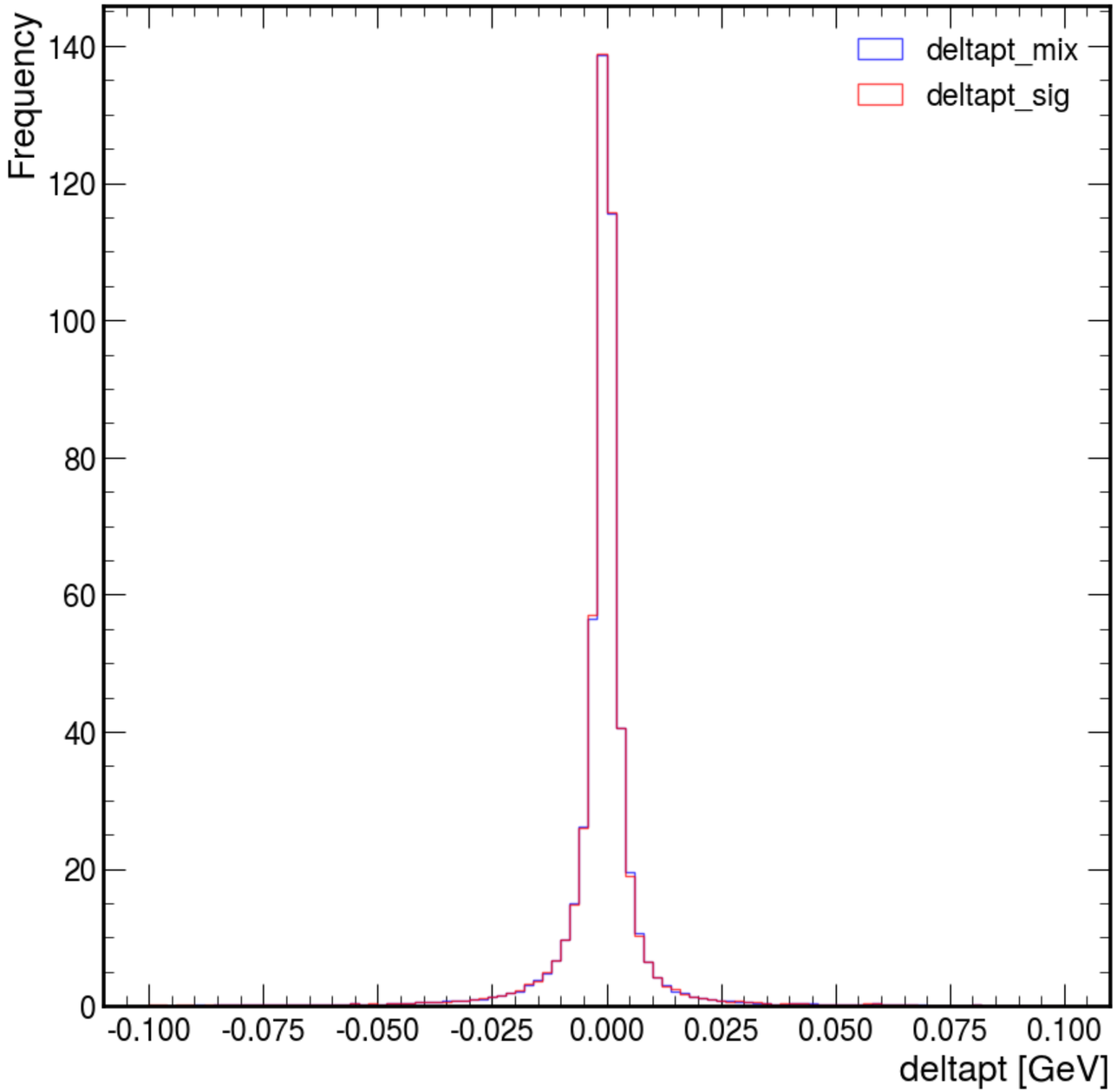

Frequency
Nbkghit/Nhit < 0.5
Nbkghit/Nhit >= 0.5
Theta [rad]

nnHgg +BKG


Frequency
Nbkghit/Nhit < 0.5
Nbkghit/Nhit >= 0.5
Z0 [mm]


Frequency
Nbkghit/Nhit < 0.5
Nbkghit/Nhit >= 0.5
D0 [mm]

nnHgg +BKG


Frequency
140
120
100
80
60
40
20
0
deltapt_mix
deltapt_sig
-0.100
-0.075
-0.050
-0.025
0.000
0.025
0.050
0.075
0.100
deltapt [GeV]