

Tracker simulation

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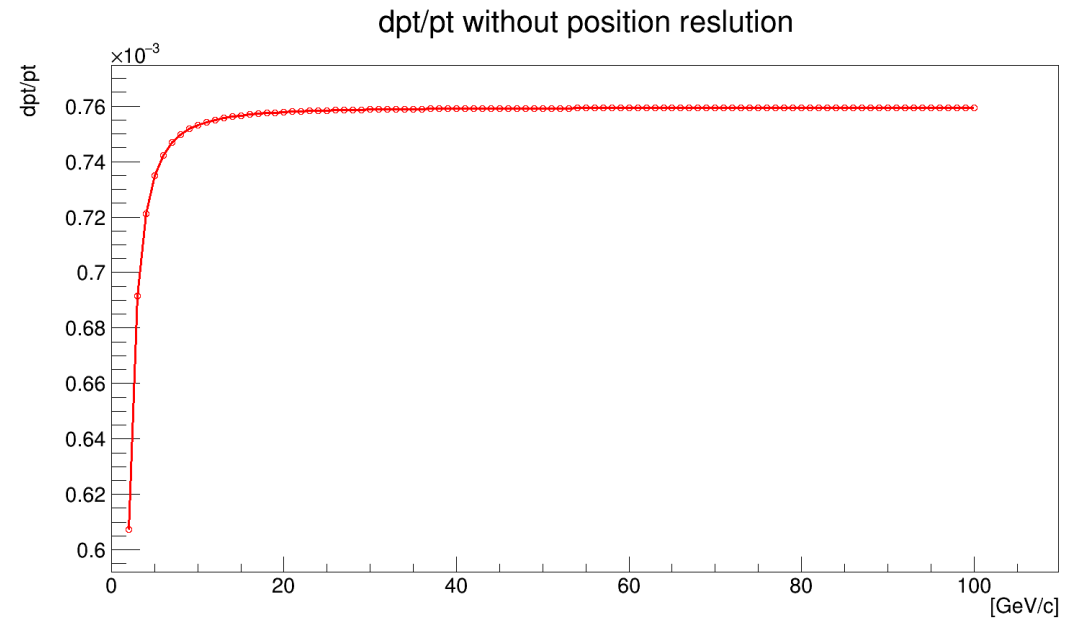
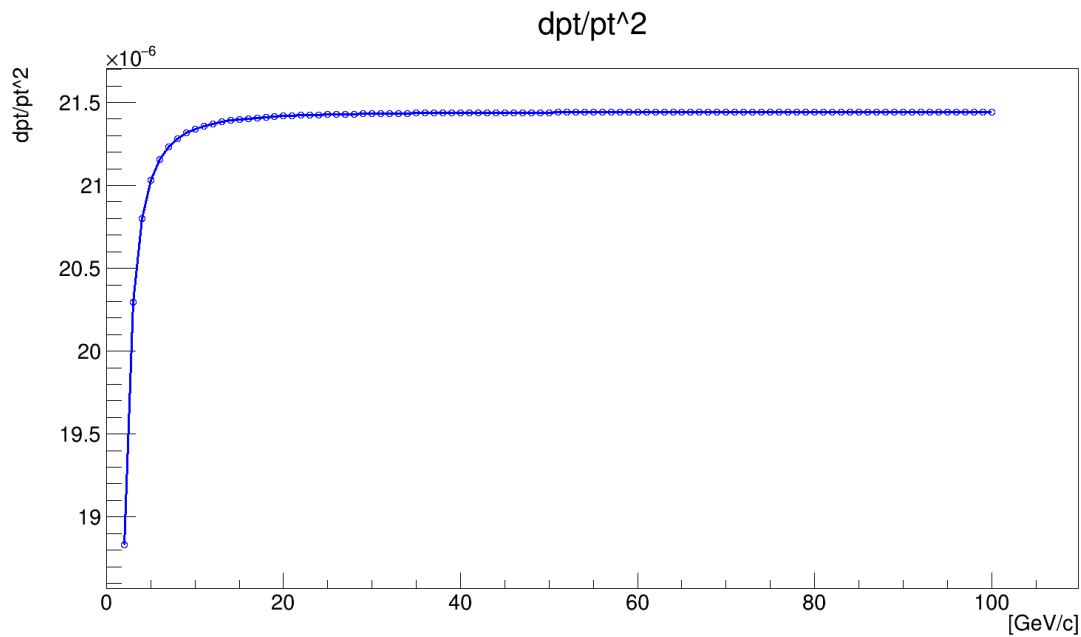
3.29

choose baseline

for the comparison, we have chosen a fixed position as the baseline:

R of 3 ITK pixels: [150 250 500]

resolution : 7.2*43um



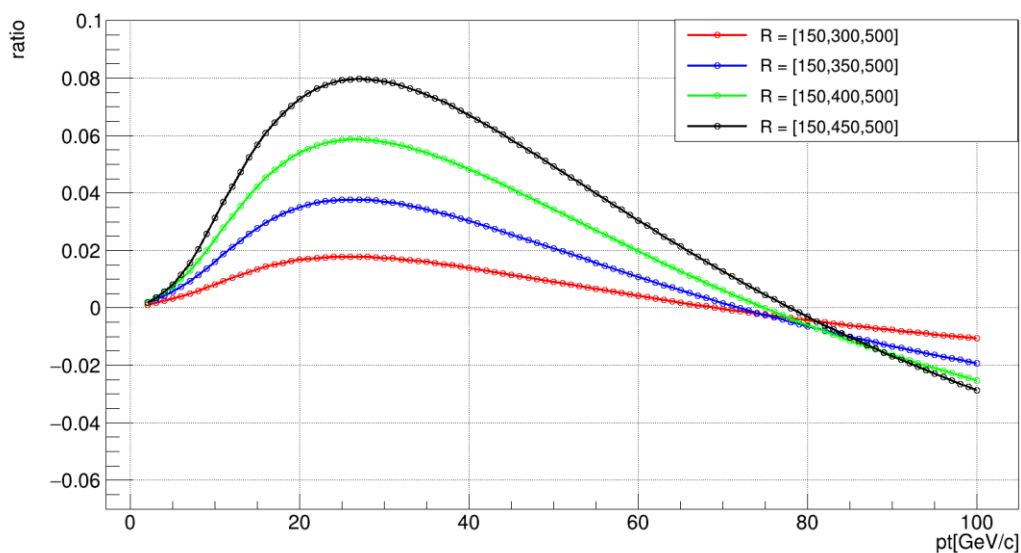
	a	b
DC	2.14 e-5	0.76 e-3
TPC	0.86 e-5	0.59 e-3

dpt/pt² compare to baseline in different pixel position

3rd pixel R=500
2nd pixel R=[300,350,400,450]

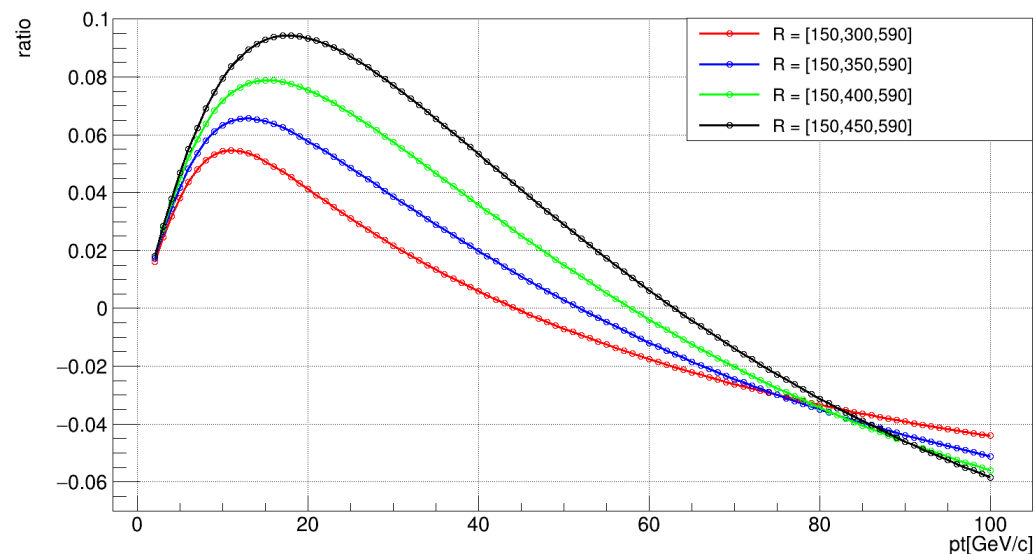
$$y = [\sigma(1/pt) / \sigma(\text{baseline}) - 1]$$

dpt/pt² in different R of itk



3rd pixel R=590
2nd pixel R=[300,350,400,450]

dpt/pt² in different R of itk

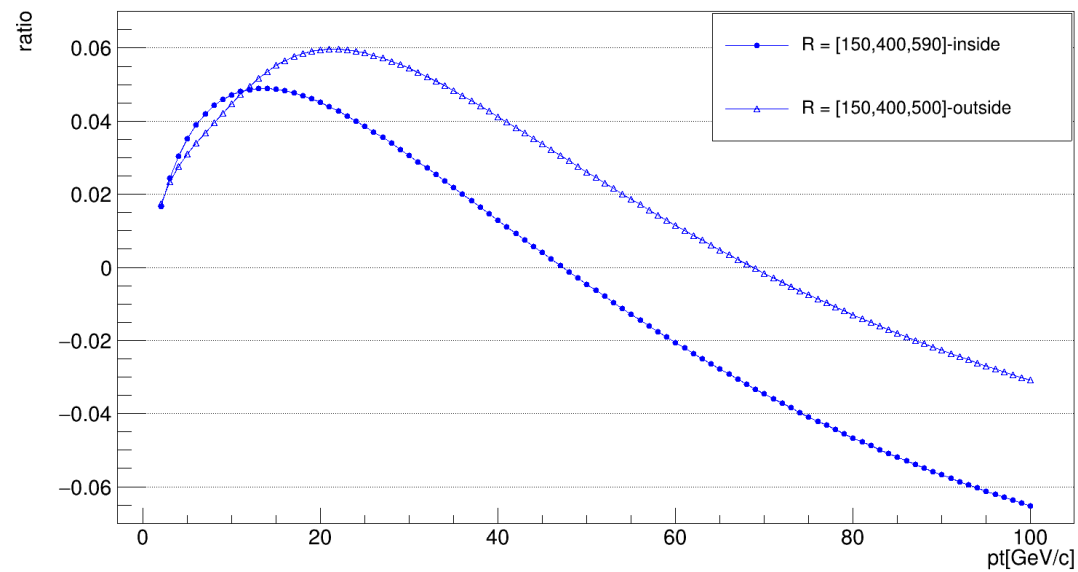


- 低动量时，第二层pixel靠近内侧更好，在20GeV附近差别最大。
- 高动量时(>80GeV)，第二层pixel靠近外侧更好，但差别不大。
- 在相对较低动量时，第三层pixel放在500mm处要比590更好；约40GeV往上590更好。

influence of supporting materials

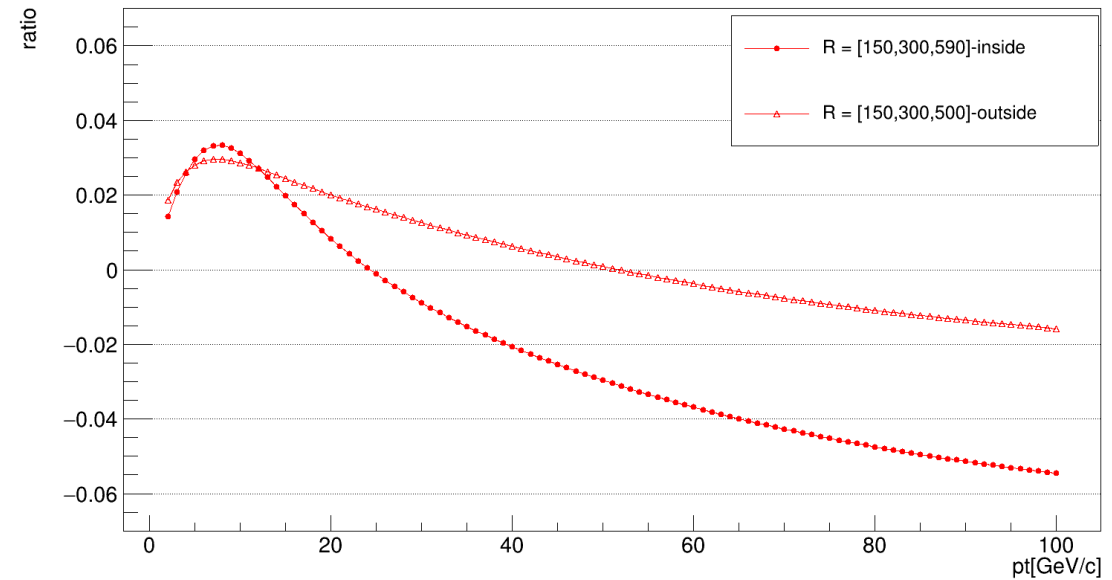
$R = [150,400,590]$, inside

$R = [150,400,500]$, outside



$R = [150,300,590]$, inside

$R = [150,300,500]$, outside

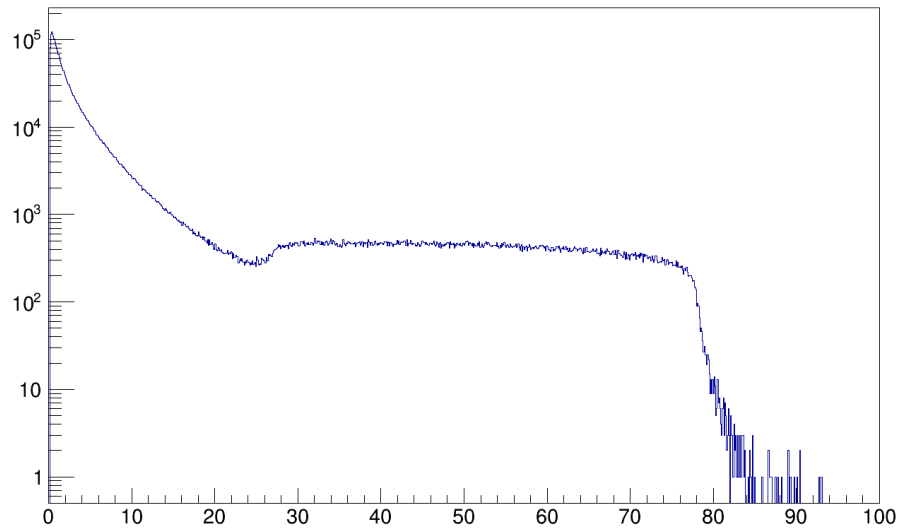


支撑材料放在内侧外侧差别不大，高动量时在4%左右，低动量更小。

optimization standards

Weighted average based on the distribution of physical events under different momentum

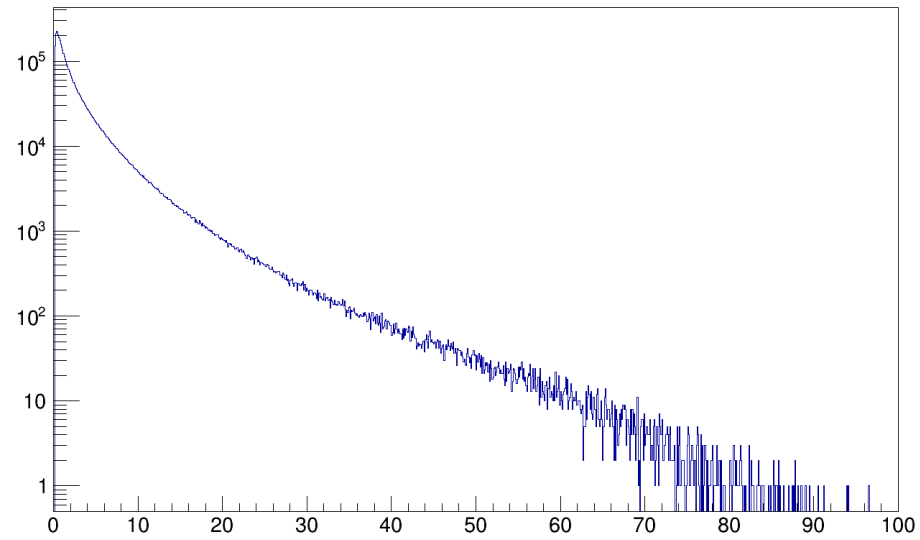
momenta of charges



$$e^+e^- \rightarrow ZH \rightarrow \mu^+\mu^-H$$

only 3%

momenta of charges



$$e^+e^- \rightarrow ZH \rightarrow q\bar{q}H$$

70%