

# Tracker simulation

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4.26

# Endcap simulation

## parameter:

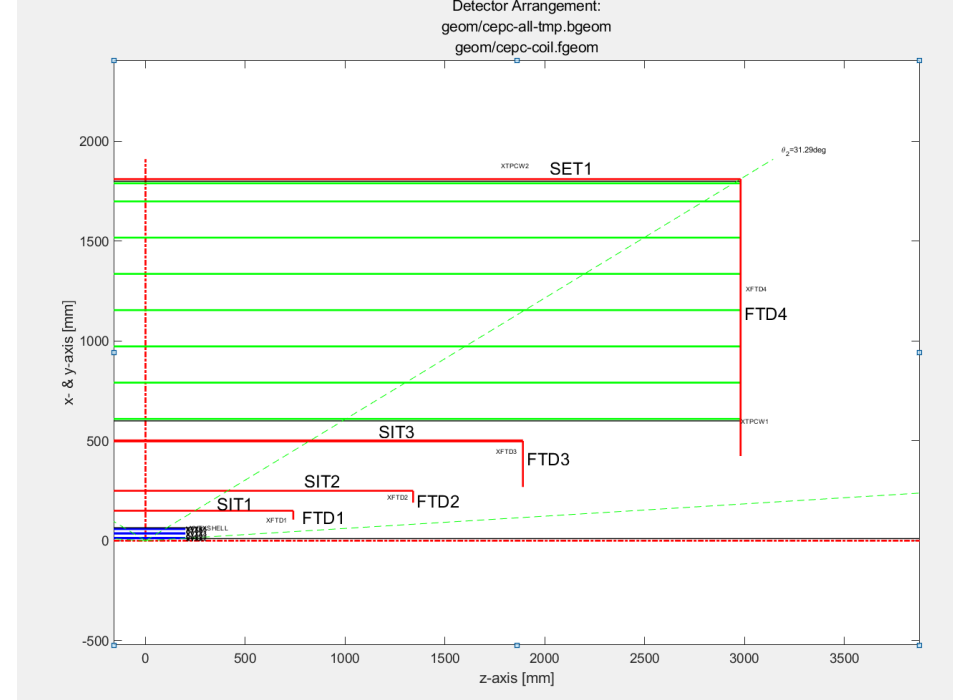
z position: 740mm, 1340mm, 1890mm, 2915mm

inner R:  $z \cdot \tan(8.1^\circ)$

outer R: 150, 250, 500, 1811

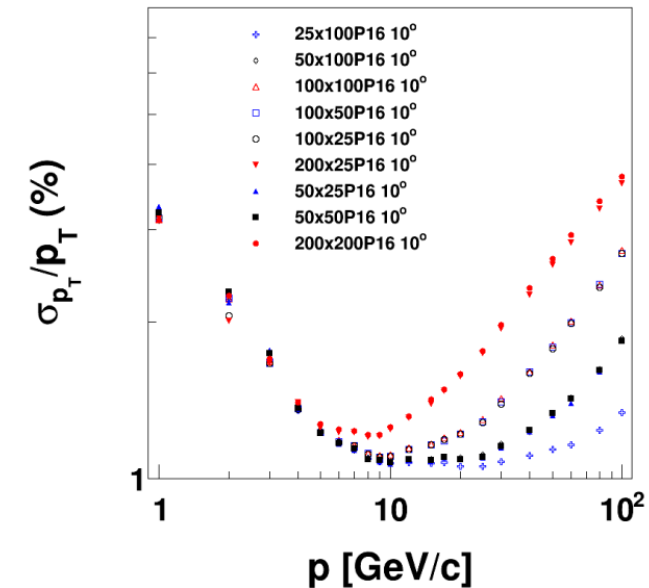
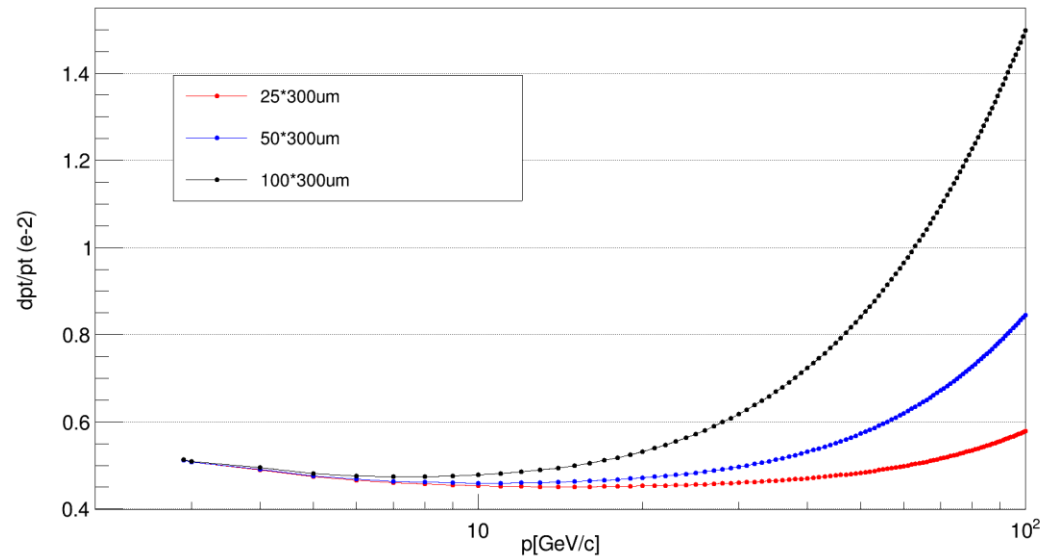
material budget : 0.6% X0

$\theta = 10^\circ$



探测器二维截面示意图

dpt/pt in different pixel pitch of endcap



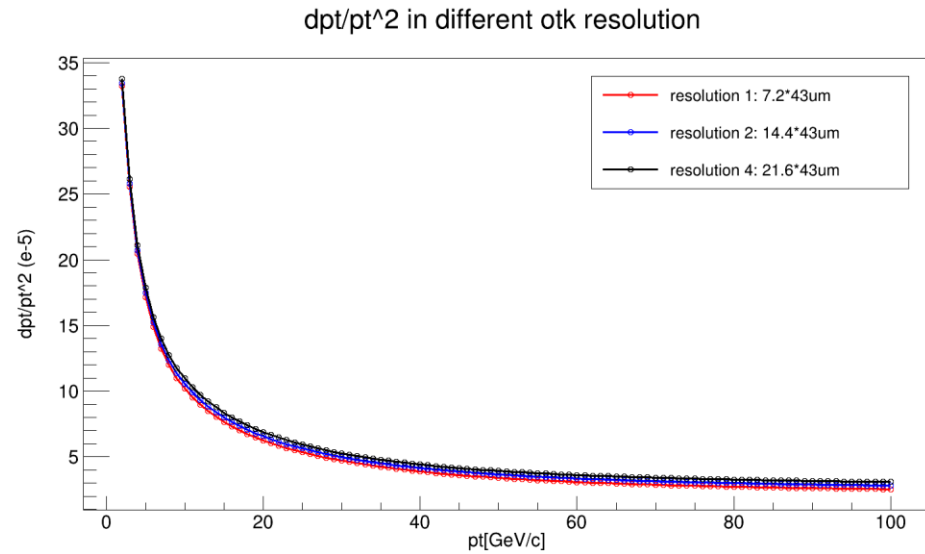
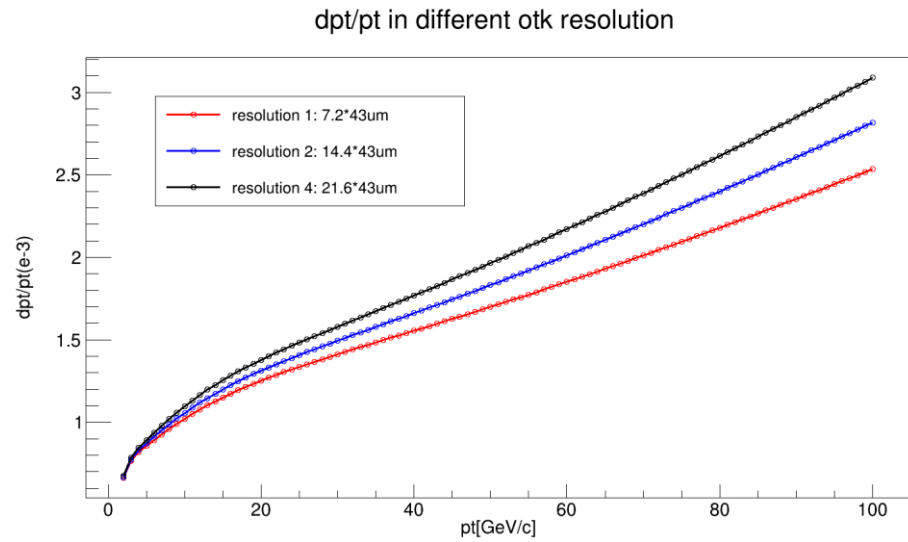
# Outer tracker simulation

3组不同的OTK的分辨:

**7.2\*43um**

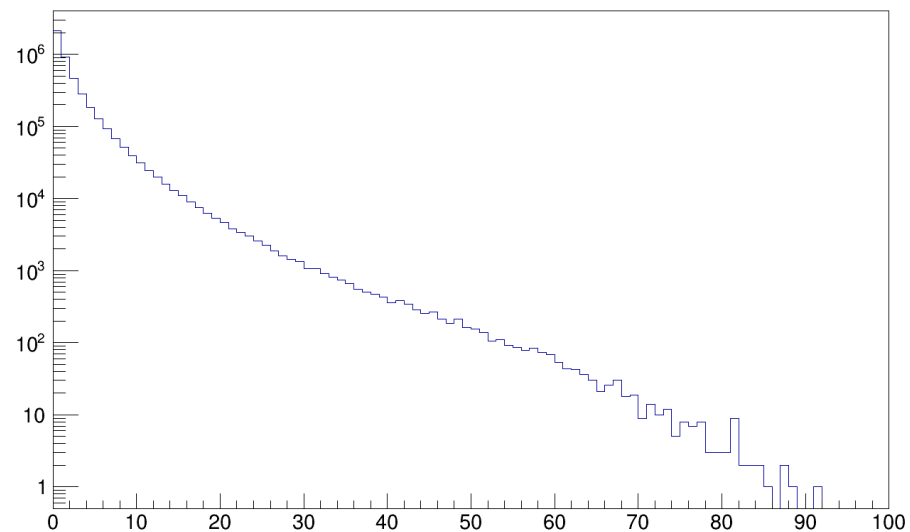
**14.4\*43um**

**21.6\*43um**



# optimization standards

trans. momentum of tracks

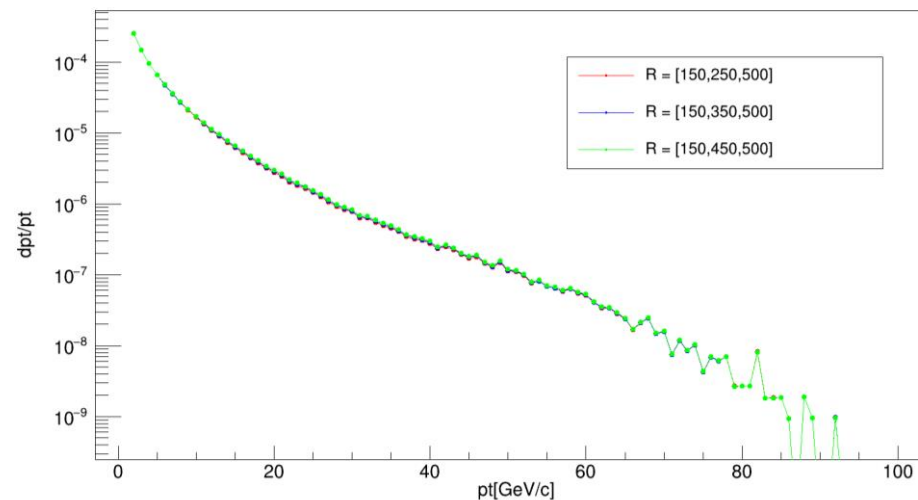


$$e^+e^- \rightarrow ZH \rightarrow q\bar{q}H$$

Pt  $\geq 2$  的事例数占比为 **53.3%**

使用dpt/pt, 结果差别不明显

在pt  $\geq 2$  的范围, 对不同位置的pixel的dpt/pt做加权平均

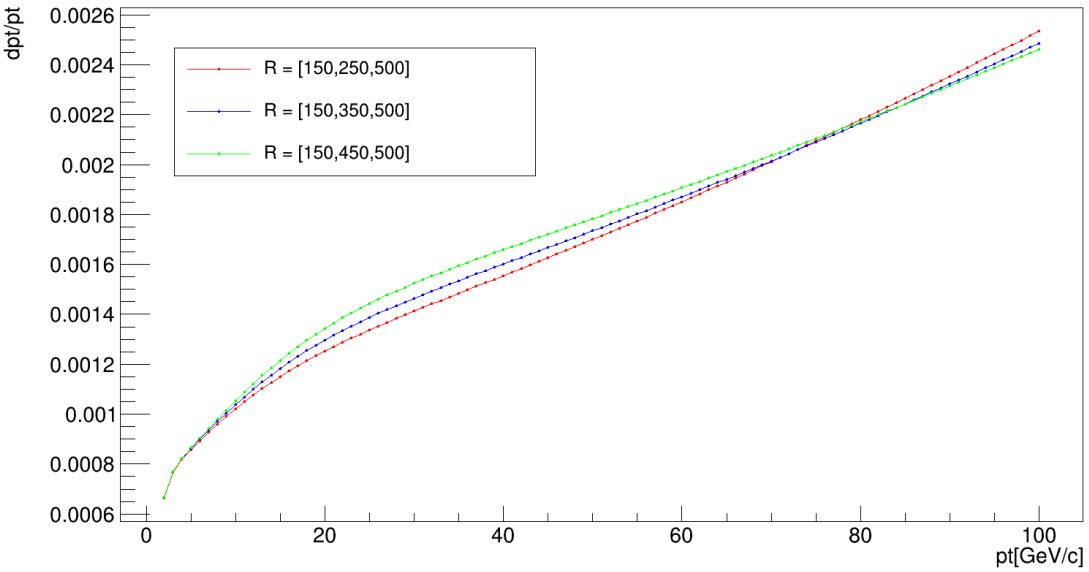


	integration value use dpt/pt	integration value use dpt/pt^2
2nd layer R=250mm	7.979	2.392
2nd layer R=350mm	8.035	2.401
2nd layer R=450mm	8.077	2.405

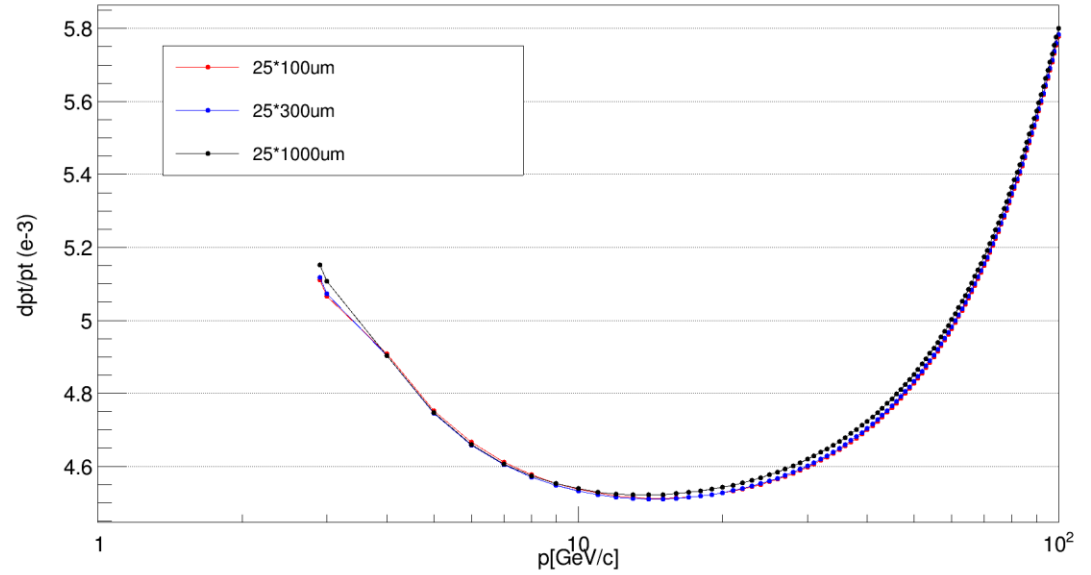
对加权平均后的曲线积分的结果( $\times 10^{-4}$ )

# back up

### dpt/pt in different ITK position



### dpt/pt in different resolution of endcap



	integration value
2nd layer R=250mm	1.696
2nd layer R=350mm	1.711
2nd layer R=450mm	1.738