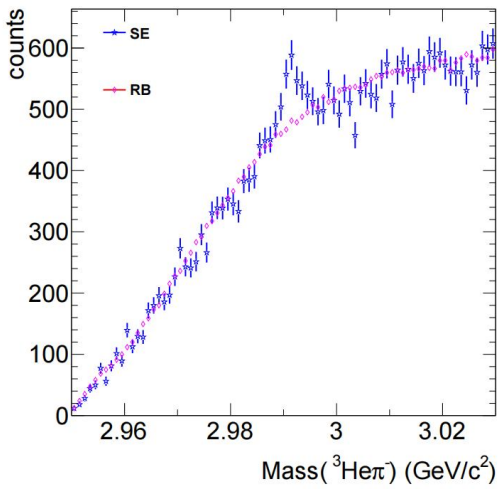
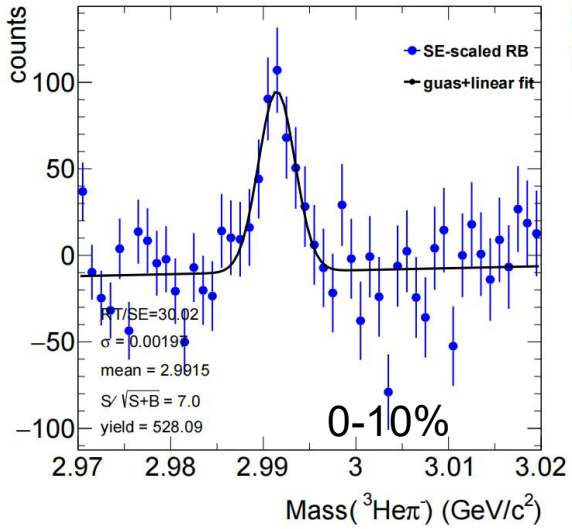
Signal and acceptance

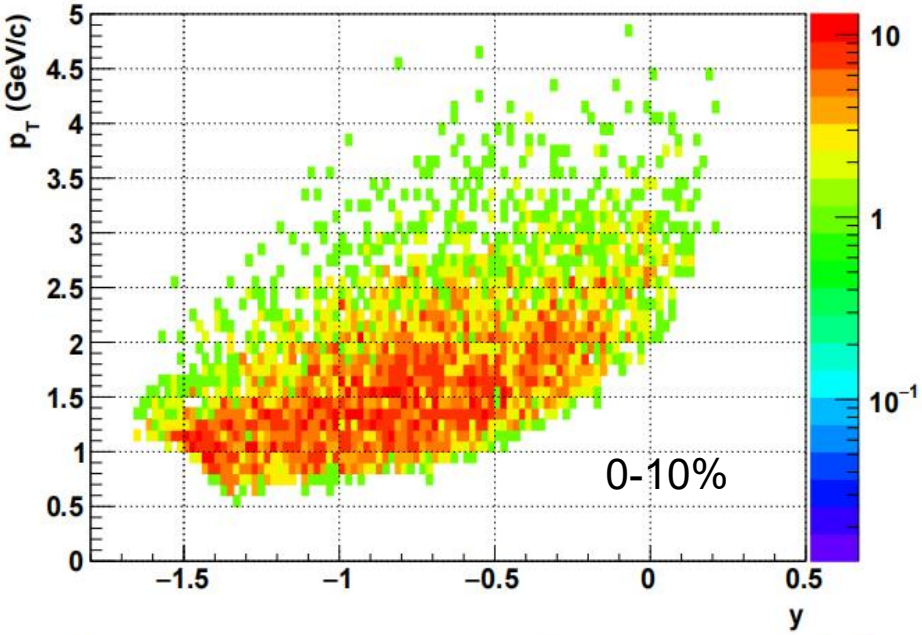
- bin by bin counting

0-10%
l >1, ldl>6
chi2topo<5,
chi2ndf<2.2
chi2prim_pi>5
chi2prim_he>0

pt_pi>0.1

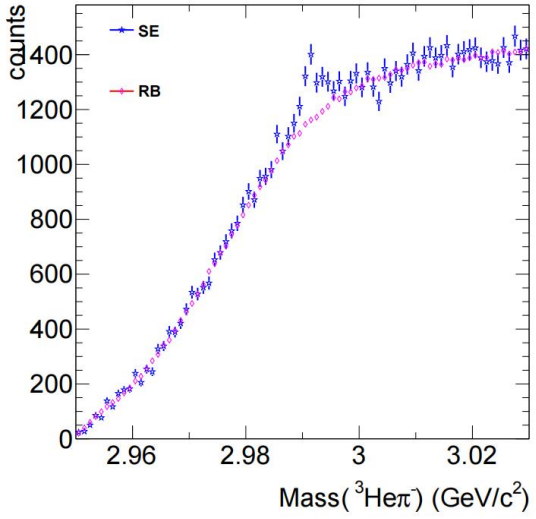


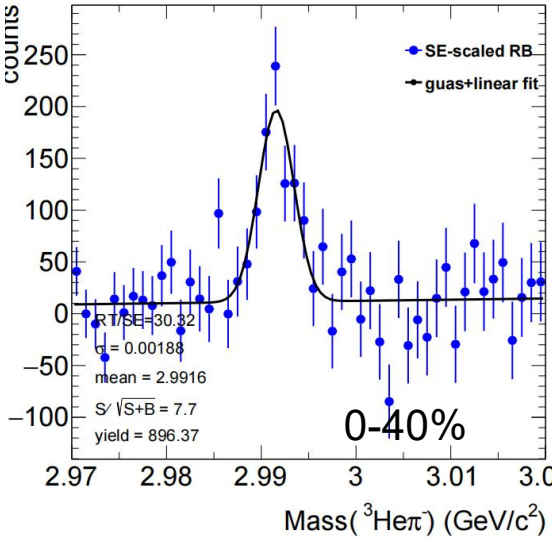


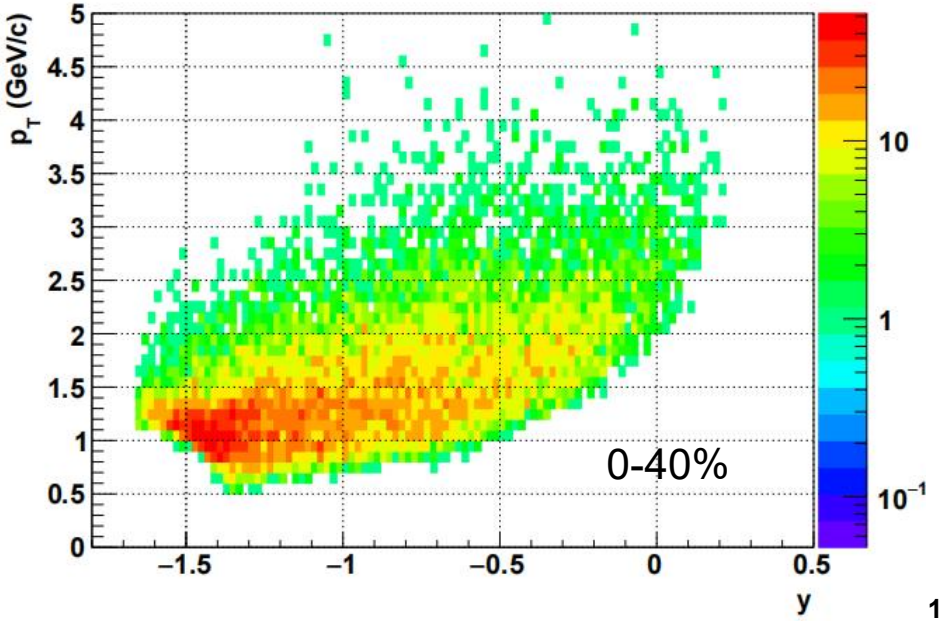


0-40%
l >1, ldl>6
chi2topo<5,
chi2ndf<2.2
chi2prim_pi>5
chi2prim_he>0

pt_pi>0.1





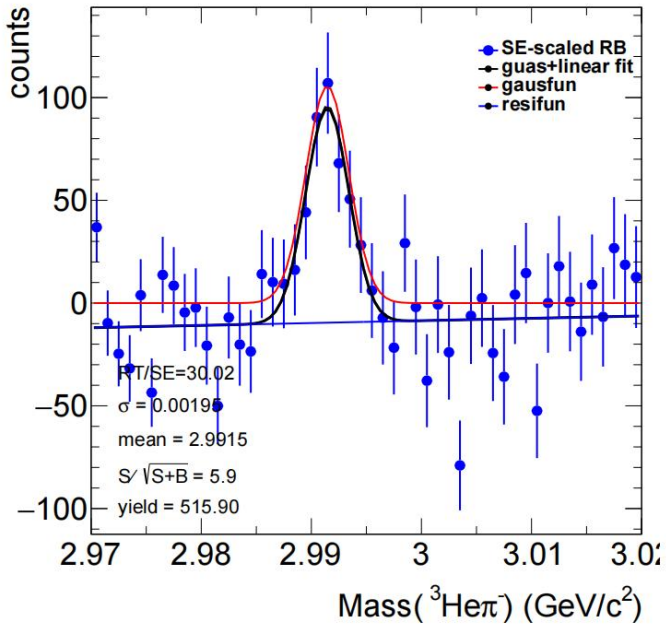


Signal and acceptance

•integral

0-10%
l >1, ldl>6
chi2topo<5,
chi2ndf<2.2
chi2prim_pi>5
chi2prim_he>0

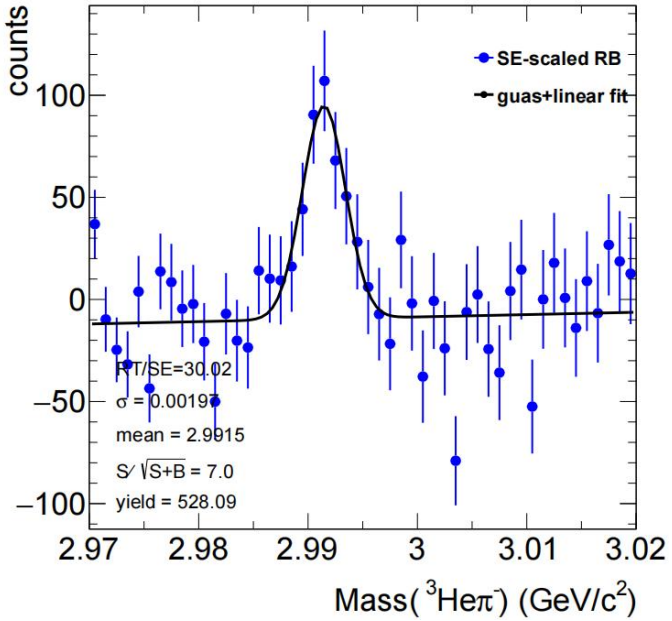
pt_pi>0.1



•bin by bin counting

0-10%
l >1, ldl>6
chi2topo<5,
chi2ndf<2.2
chi2prim_pi>5
chi2prim_he>0

pt_pi>0.1



About integral method
- •fit function:gausn(0)*[3]+pol1(4)
- •signal yield :fit function's first parameter
- •significance :fit function's first parameter over error of fit function's first parameter

About bin by bin counting method
- •fit function:[1]*exp(-(x-[0])*(x-[0])/2/[2]/[2]) + [3]+[4]*x

Signal with different pt and y ranges （three y ranges）

- Cen:0-10%.
- the mass window in each y_pt bin :fitmean-3*fitsigma<particlemass<fitmean+3*fitsigma
- fit function:gaus+line

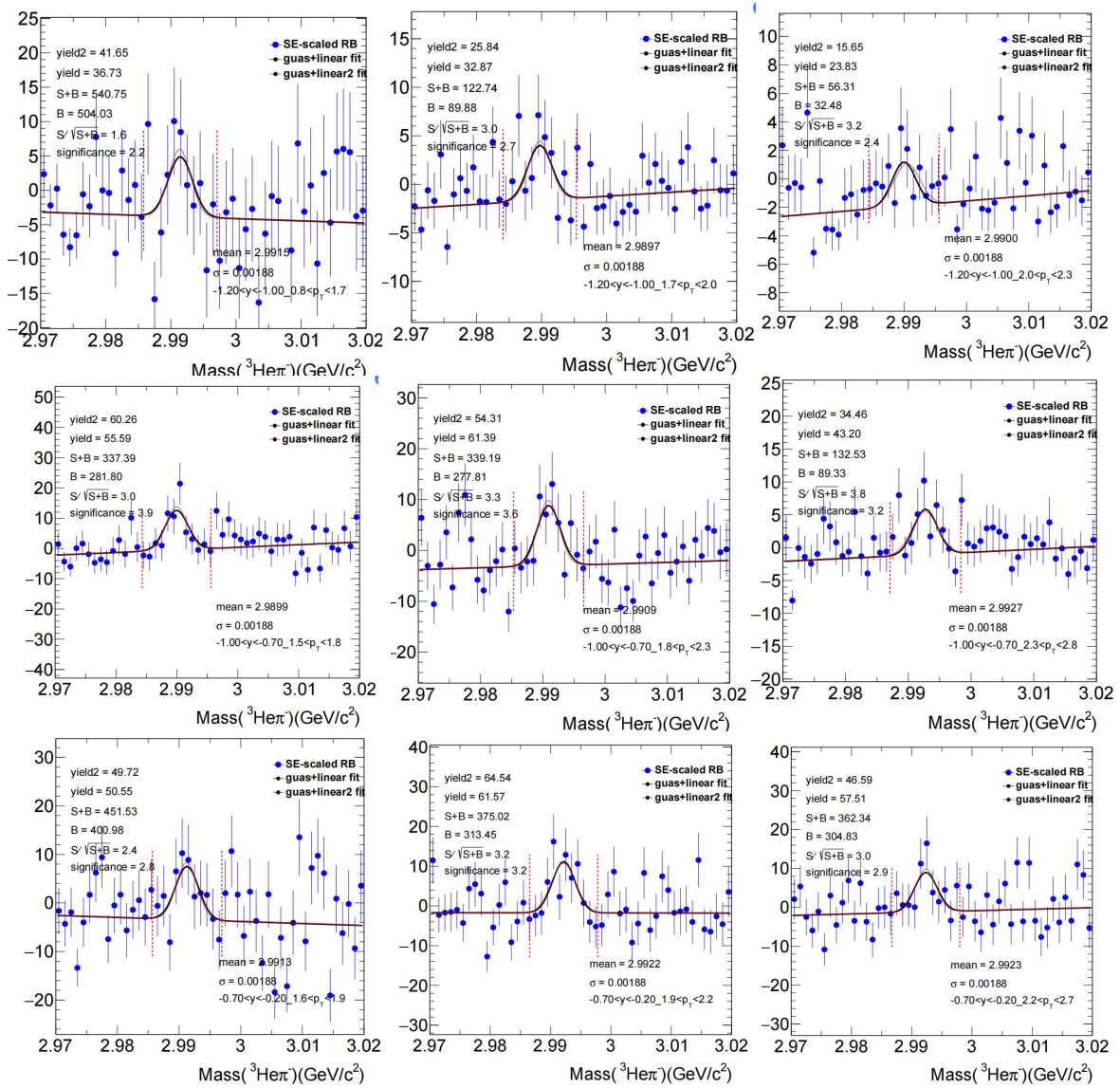
- bin by bin counting(black line)
  - Fix fitmean range(guided by 0-40%) (mean-sigma,mean+sigma)
  - Fix fitsigma(guided by 0-40%)

- integral method(red line)
  - Fix fitmean range(guided by 0-40%) (mean-sigma,mean+sigma)
  - Fix fitsigma(guided by 0-40%) (sigma-0.0002,sigma+0.0002)

-1.2<y<-1.0

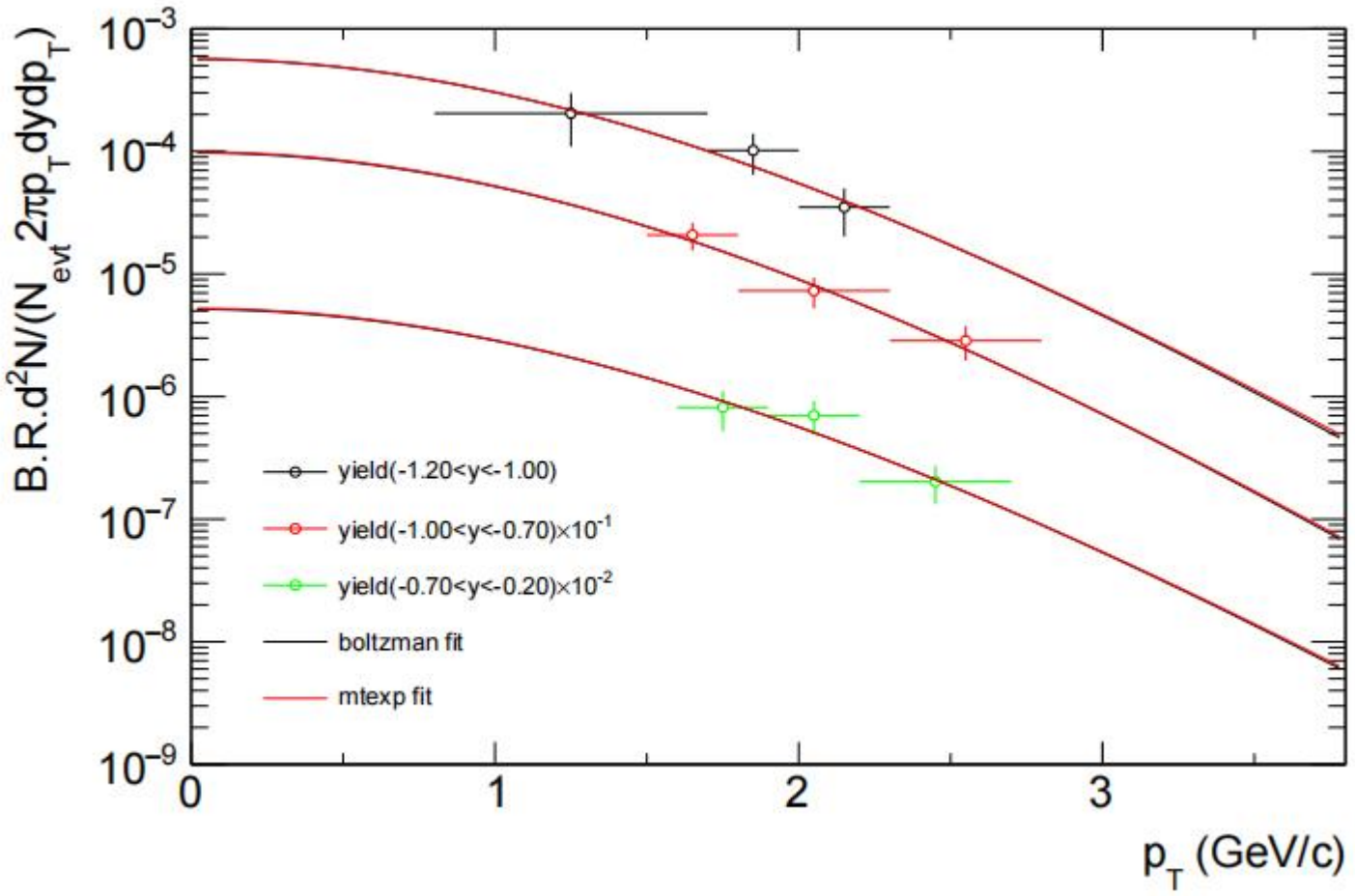
-1.0<y<-0.7

-0.7<y<-0.2



P_T spectra

•Cen:0-10%.
•yield:bin by bin count(•the mass window in each y_pt bin is the same as that of no y_pt binning)



$$\frac{d^2N}{dp_T dy} = \frac{1}{\text{B.R.}} \times \frac{N^{\text{raw}}}{N_{\text{evt}}\Delta(p_T)\Delta(y)} \times \frac{1}{\varepsilon_{\text{TPC}} \times \varepsilon_{\text{PID}}}$$

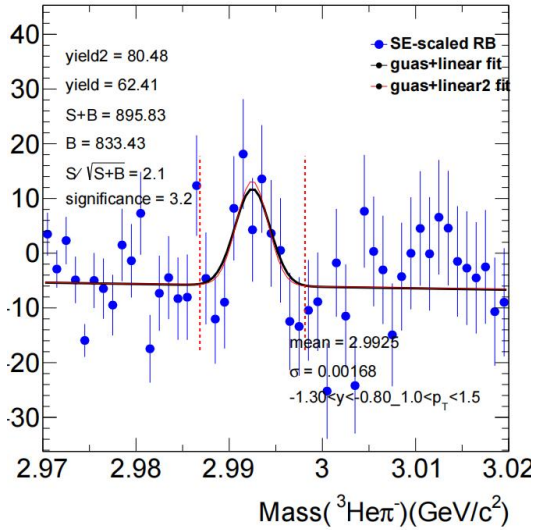
★spectra:
N_raw:the efficiency corrected signal counts.

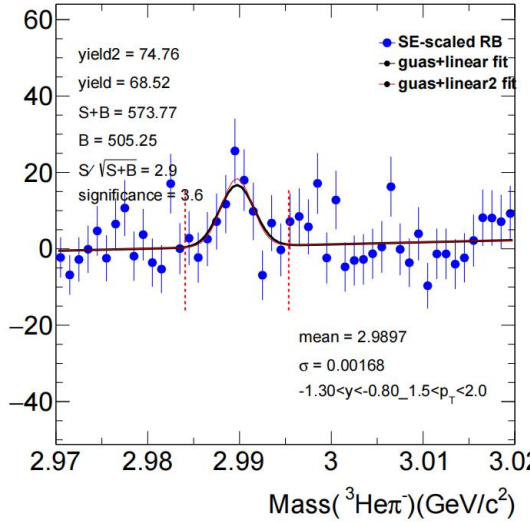
★ there are many TH1F corresponding to diefferent y range filled with the caculated values whose X-axis is Pt.

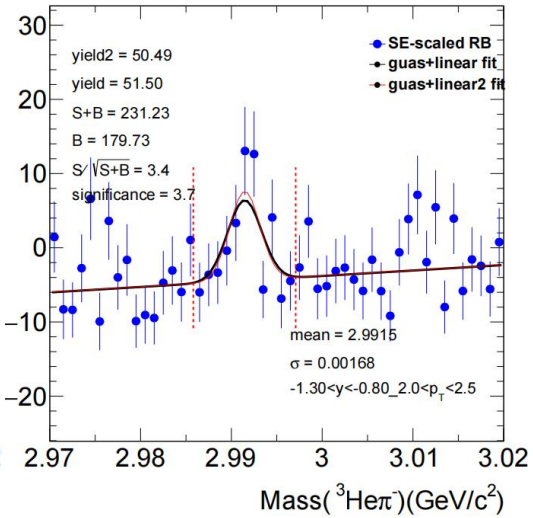
Signal with different pt and y ranges （two y ranges）

- Cen:0-10%.
- the mass window in each y_pt bin :fitmean-3*fitsigma<particlemass<fitmean+3*fitsigma
- fit function:gaus+line

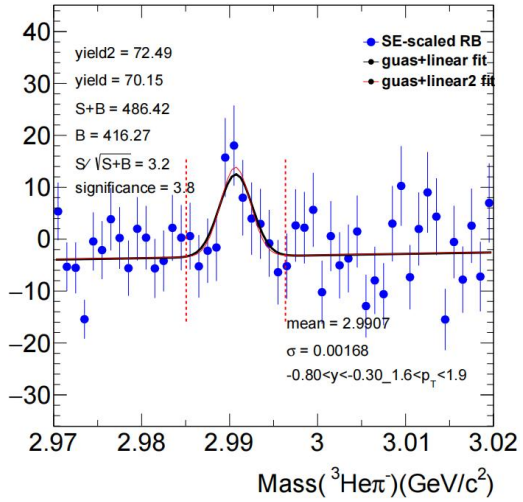
- bin by bin counting(black line)
  - Fix fitmean range(guided by 0-40%) (mean-sigma,mean+sigma)
  - Fix fitsigma(guided by 0-40%)

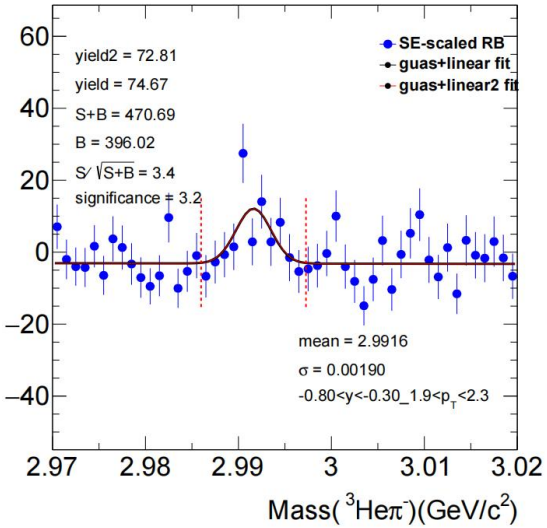


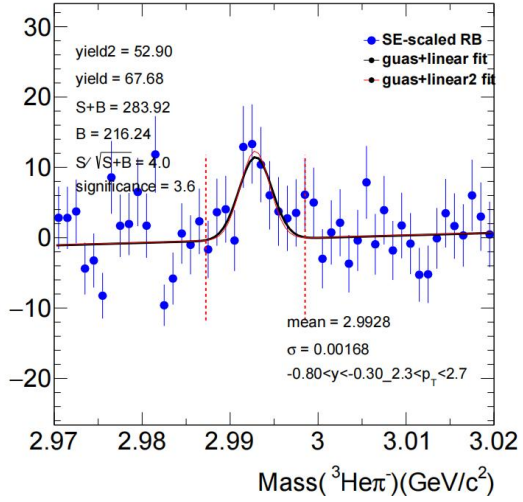




- integral method(red line)
  - Fix fitmean range(guided by 0-40%) (mean-sigma,mean+sigma)
  - Fix fitsigma(guided by 0-40%) (sigma-0.0002,sigma+0.0002)

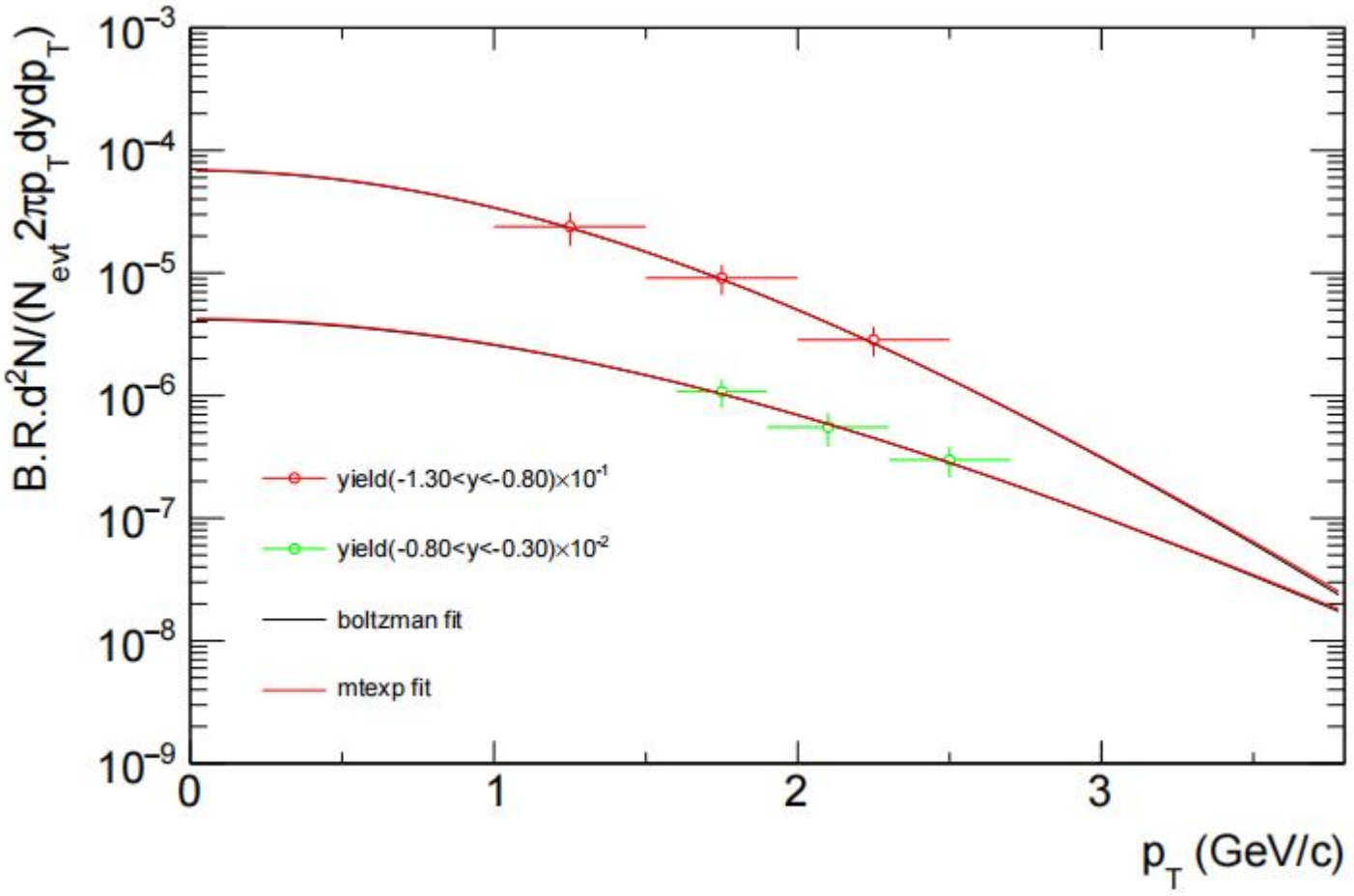






P_T spectra

•Cen:0-10%.
•yield:bin by bin count(•the mass window in each y_pt bin is the same as that of no y_pt binning)



$$\frac{d^2N}{dp_T dy} = \frac{1}{\text{B.R.}} \times \frac{N^{raw}}{N_{evt}\Delta(p_T)\Delta(y)} \times \frac{1}{\varepsilon_{TPC} \times \varepsilon_{PID}}$$

★spectra:
N_raw:the efficiency corrected signal counts.

★ there are many TH1F corresponding to diefferent y range filled with the caculated values whose X-axis is Pt.