

Production Kin1&2 (BB at 97 deg) and Kin3 (BB at 92 deg).

General Cut:

DBB_evtypebits<(1<<3)&& DBB_edtpl[0]==0 && DBB_l1a[0]>=120 && DBB_l1a[0]<=570 &&
fabs(exL_ph)<=0.030 && fabs(exL_th)<=0.060

Electron Cut:

fabs(rpl_z)<=0.075 && (L_prl1_e*0.93+L_prl2_e*1.13)>2700 && L_tr_n==1 && BB_tr_n>0

Proton Cut:

has track matching to hit, E_vs_p graphic cut

CT cut:

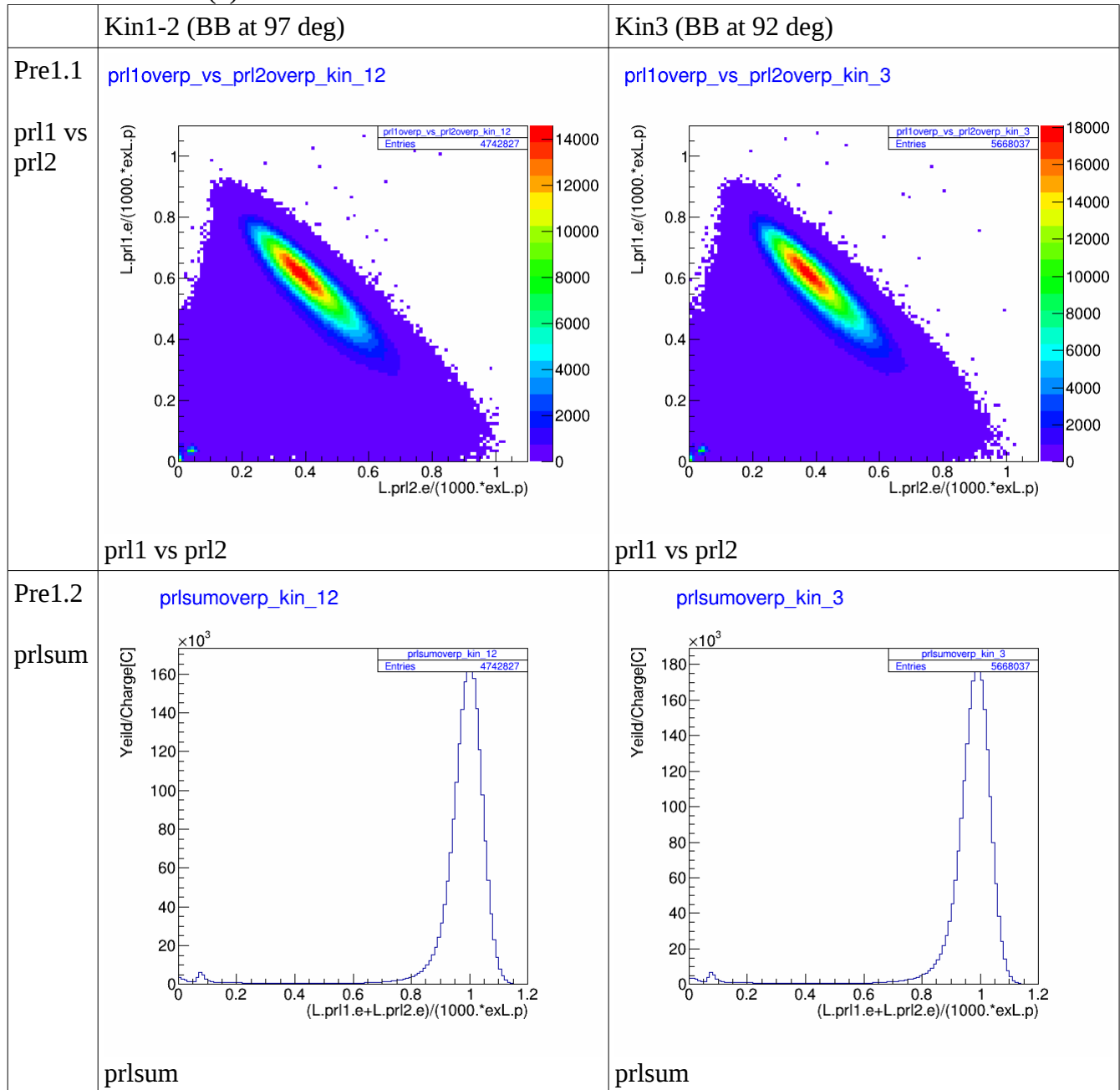
|CT|<= 3* sigma

overlap of the Kin 12 to Kin3

Kin 12 in blue Error-line

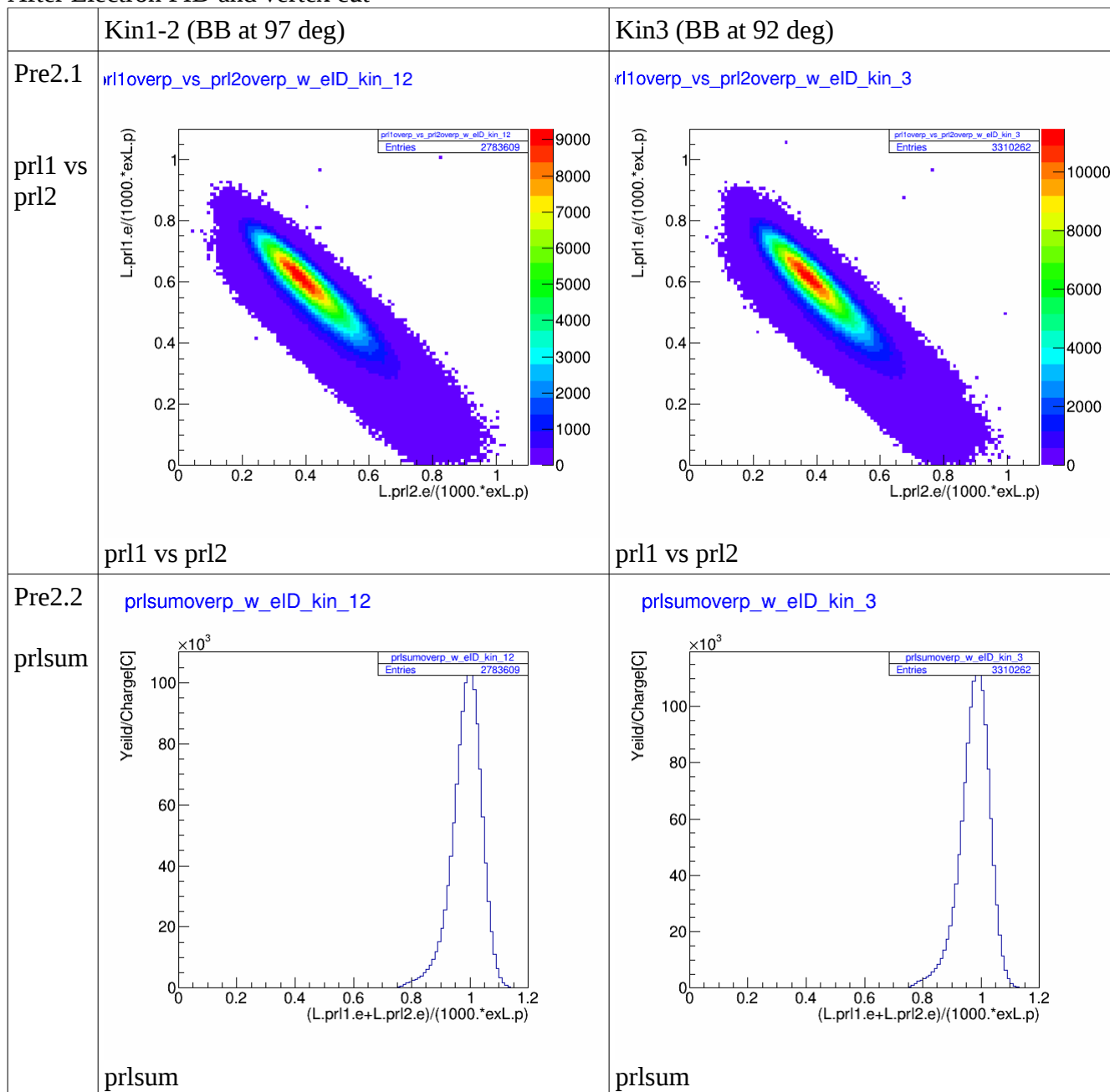
Kin 3 in Red Error-line

After Genreal Cut (1)



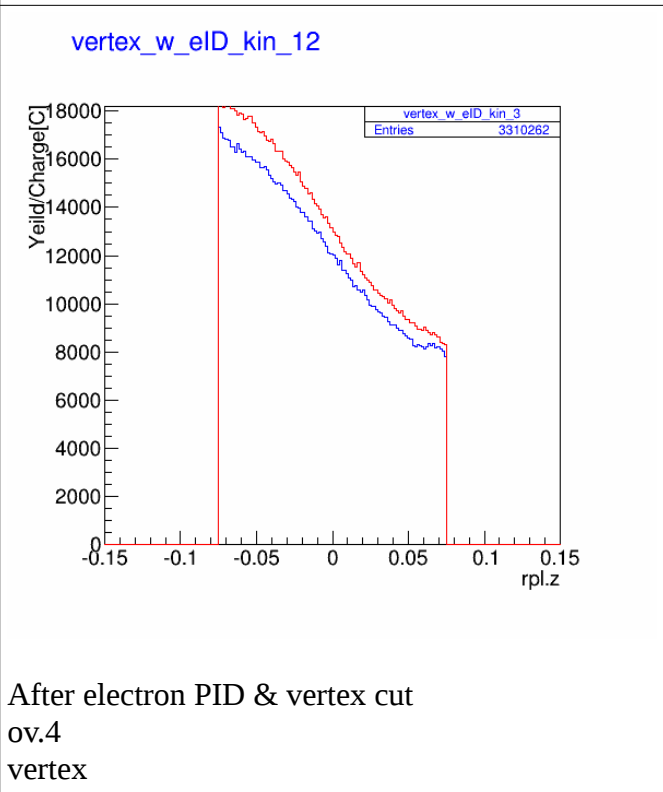
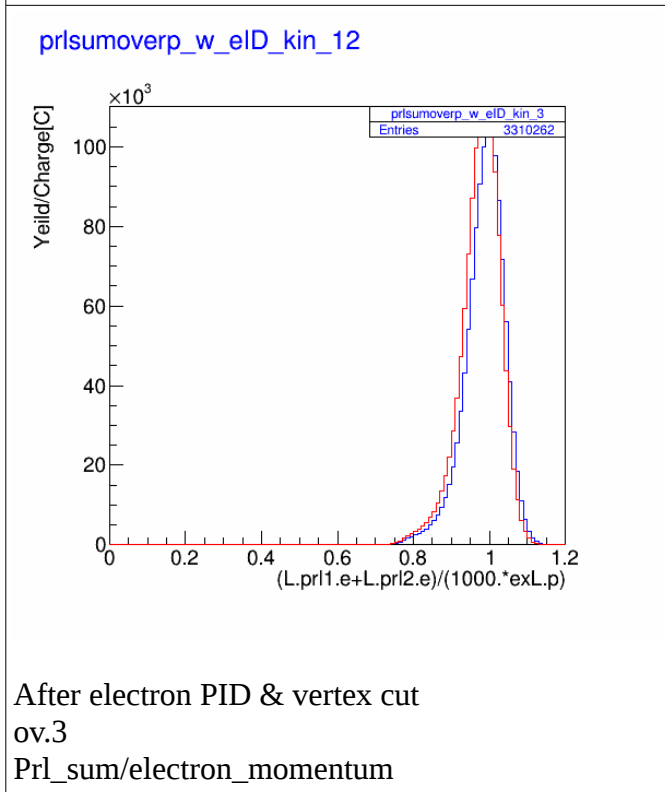
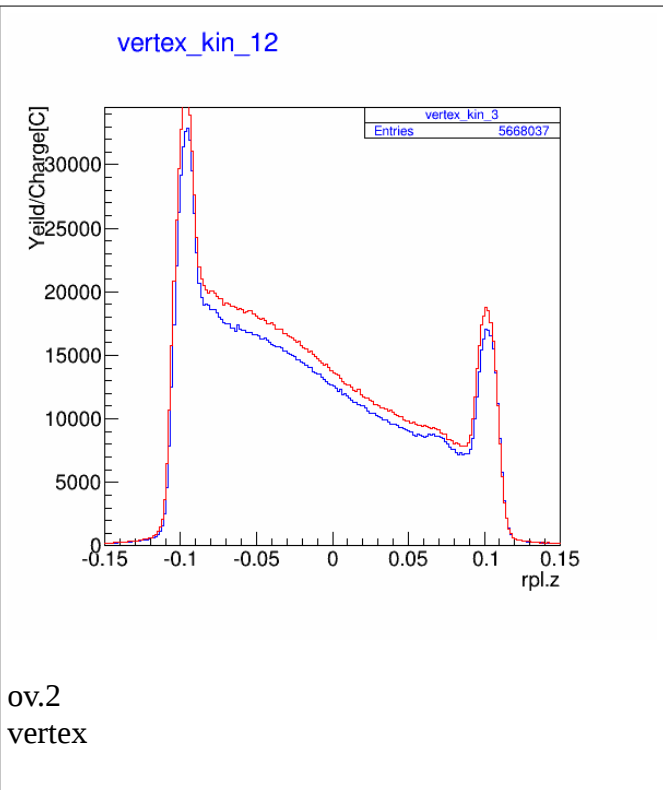
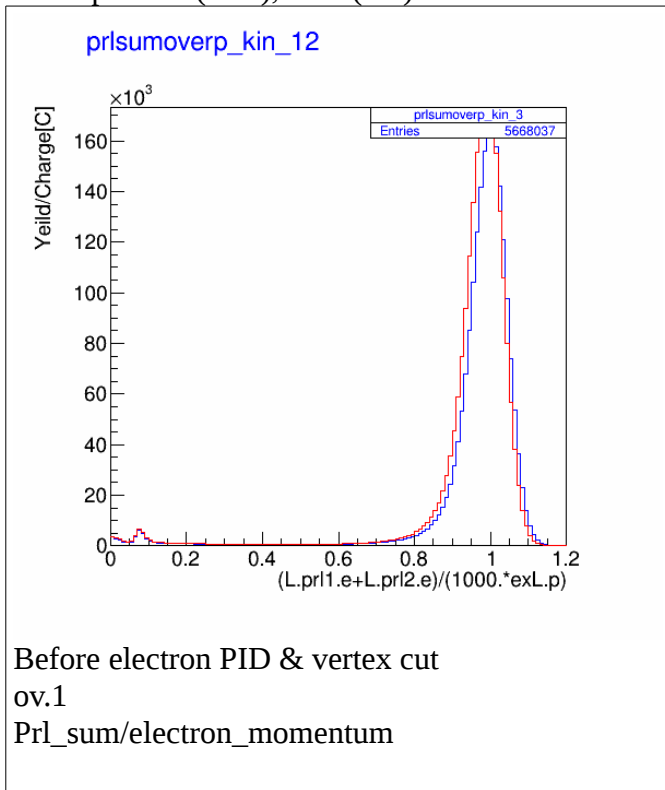
	Kin1-2 (BB at 97 deg)	Kin3 (BB at 92 deg)
Pre1.3 vertex	<p>vertex_kin_12</p> <p>vertex</p>	<p>vertex_kin_3</p> <p>vertex</p>
Pre1.4 L acceptance	<p>L_theta_vs_phi_w_eID_kin_12</p> <p>L acceptance</p>	<p>L_theta_vs_phi_w_eID_kin_3</p> <p>L acceptance</p>

After Electron PID and vertex cut

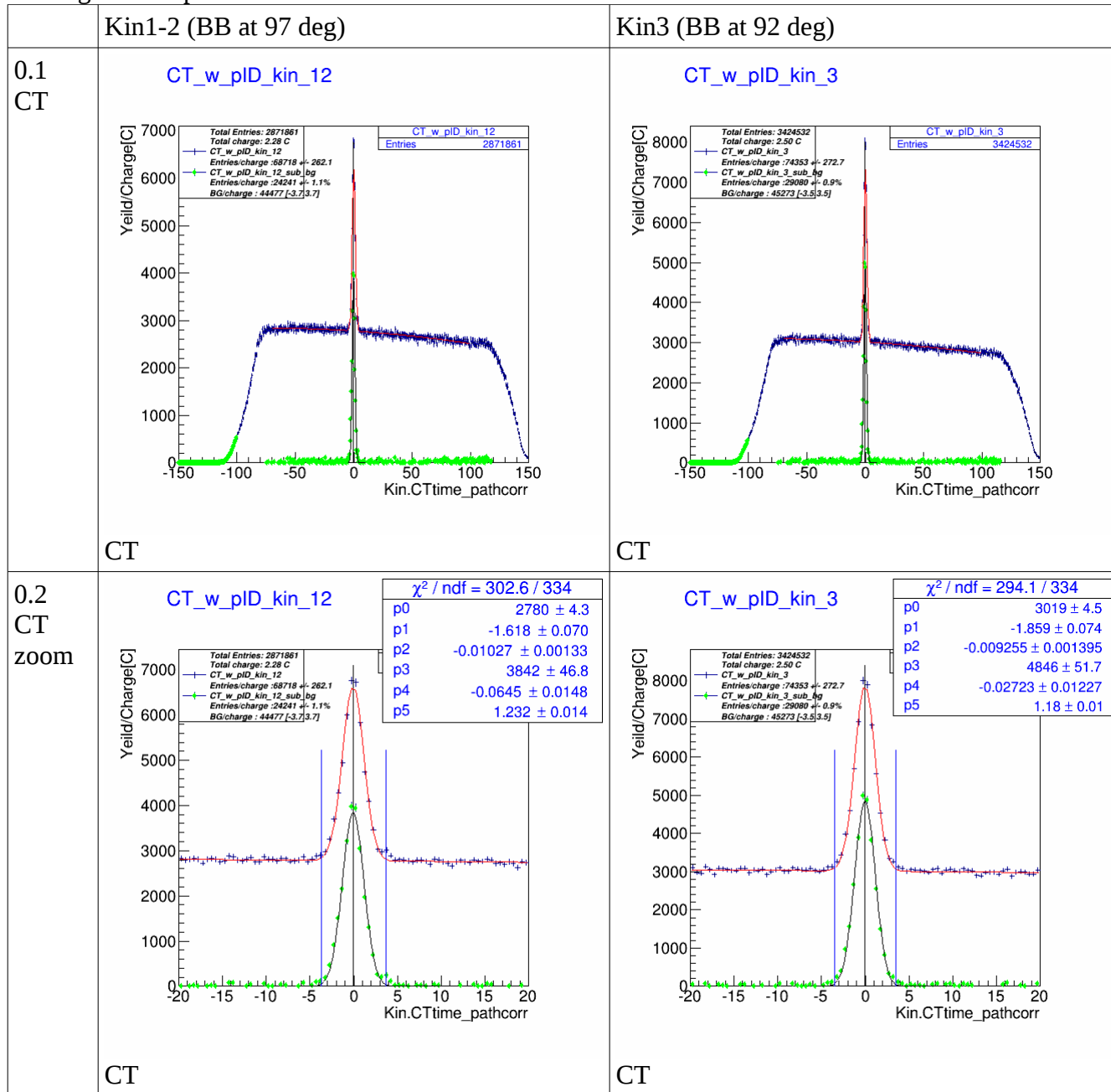


	Kin1-2 (BB at 97 deg)	Kin3 (BB at 92 deg)
Pre2.3	vertex_w_eID_kin_12	vertex_w_eID_kin_3
vertex	<p>vertex_w_eID_kin_12 Entries 2783609</p>	<p>vertex_w_eID_kin_3 Entries 3310262</p>
vertex	vertex	vertex

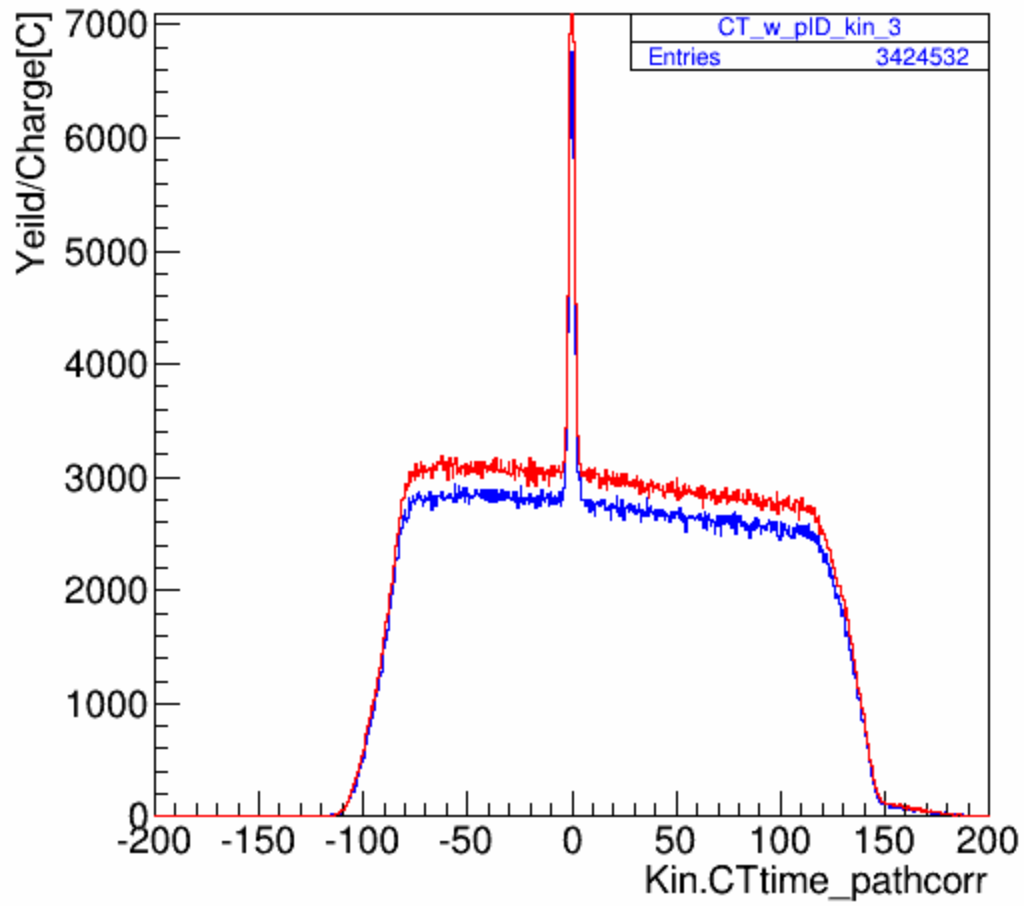
Overlap before & after electron PID
 Overlap Kin12(blue), Kin3(red)



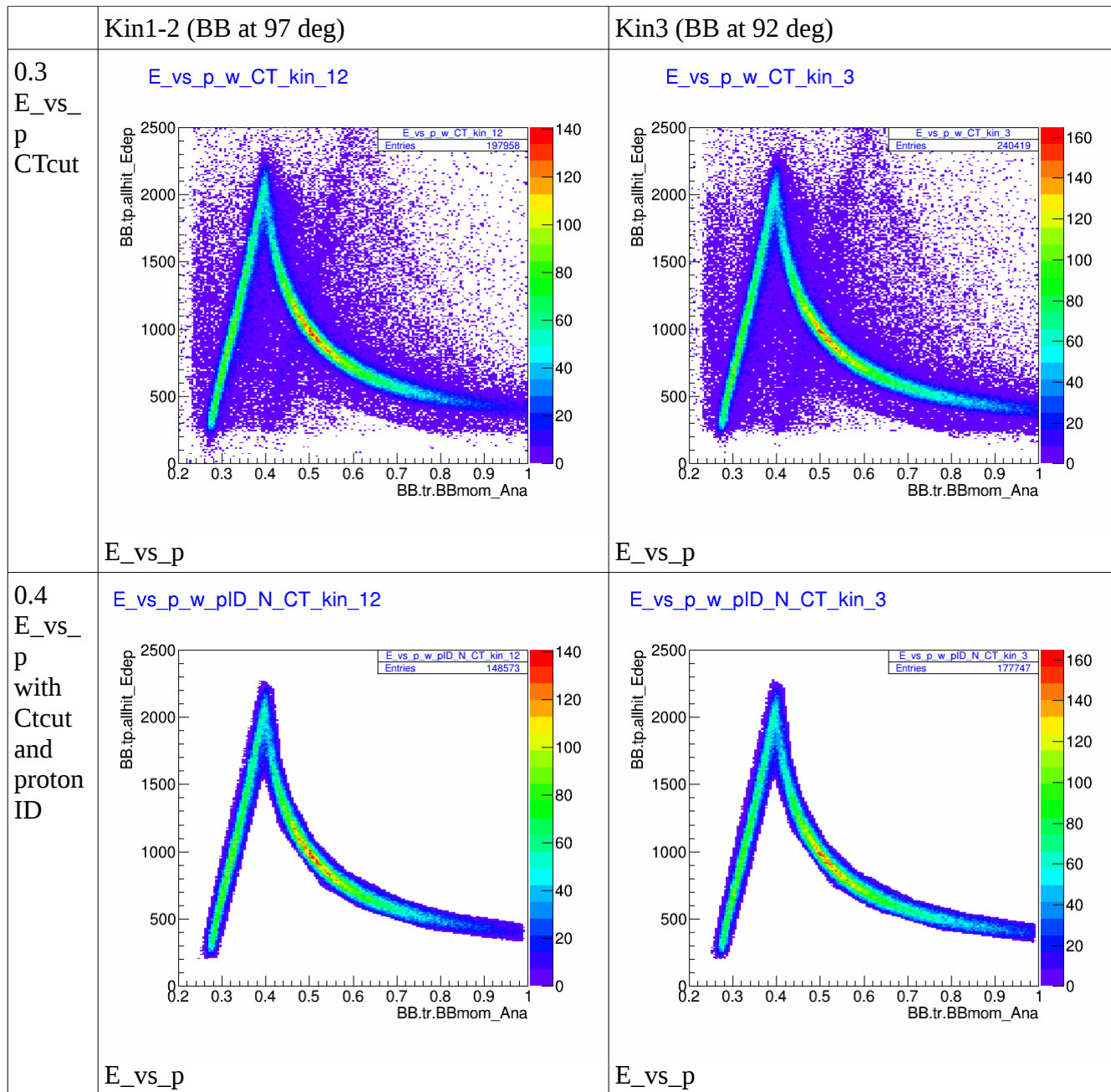
Making CT and proton ID cut



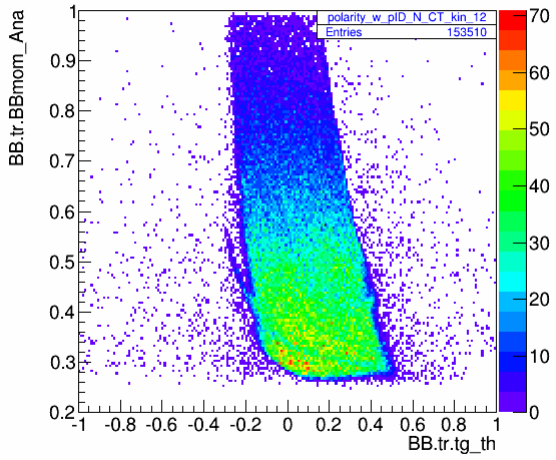
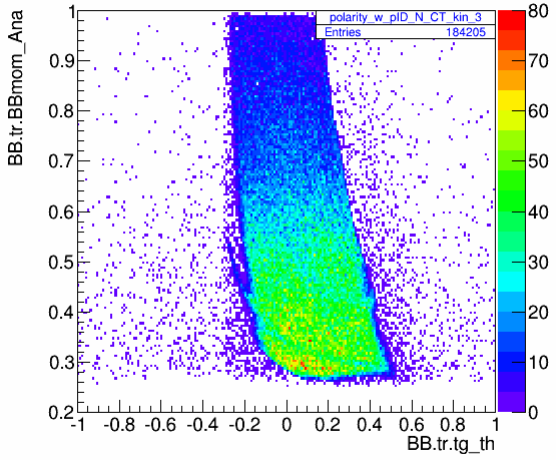
CT_w_pID_kin_12



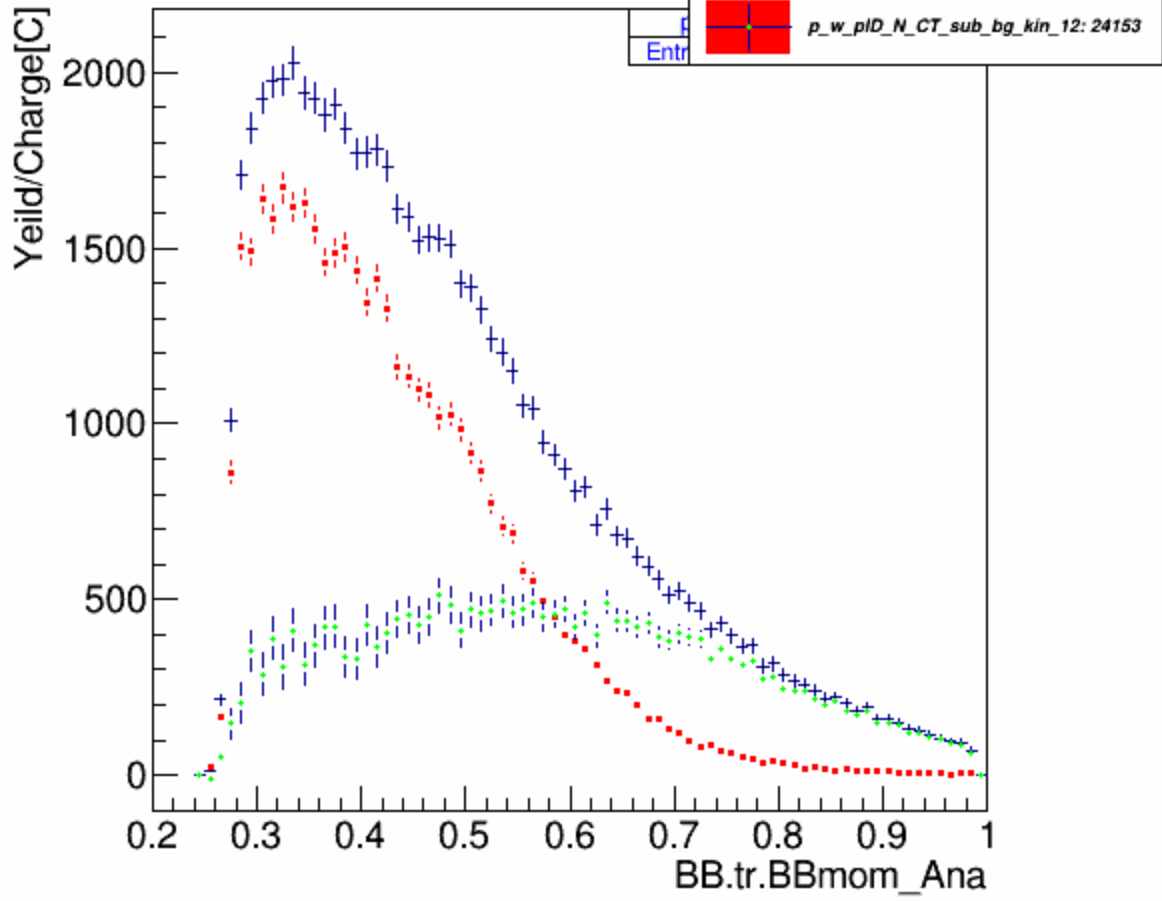
ov.5 CT overlap
Overlap Kin12(blue), Kin3(red)



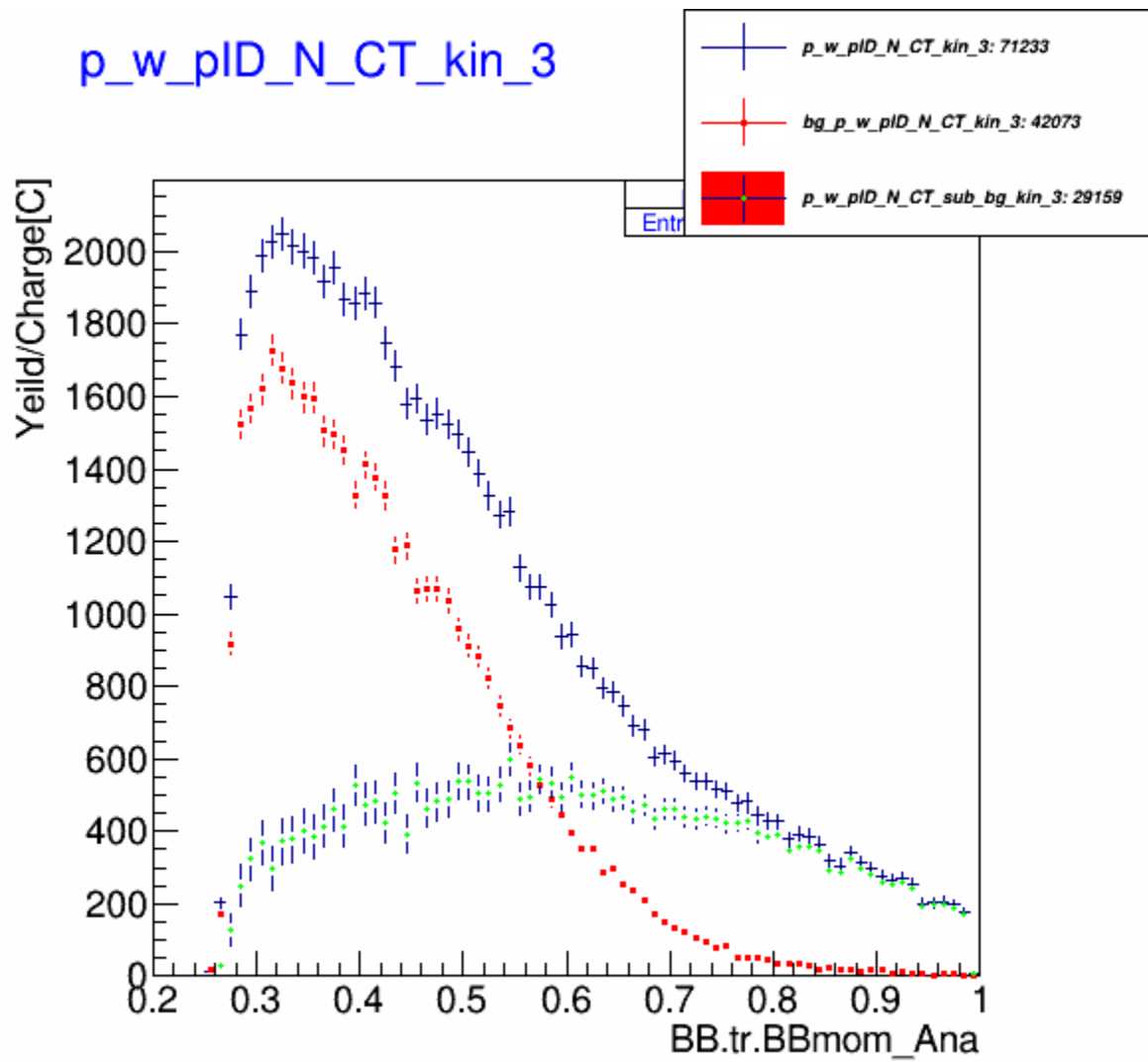
After proton PID and CT cut

	Kin1-2 (BB at 97 deg)	Kin3 (BB at 92 deg)
1.1	polarity_w_pID_N_CT_kin_12	polarity_w_pID_N_CT_kin_3
polarity check	 <p>BB.tr.BBmom_Ana</p> <p>BB.tr.tg_th</p> <p>polarity_w_pID_N_CT_kin_12 Entries 153510</p>	 <p>BB.tr.BBmom_Ana</p> <p>BB.tr.tg_th</p> <p>polarity_w_pID_N_CT_kin_3 Entries 184205</p>
	polarity check	polarity check

p_w_pID_N_CT_kin_12

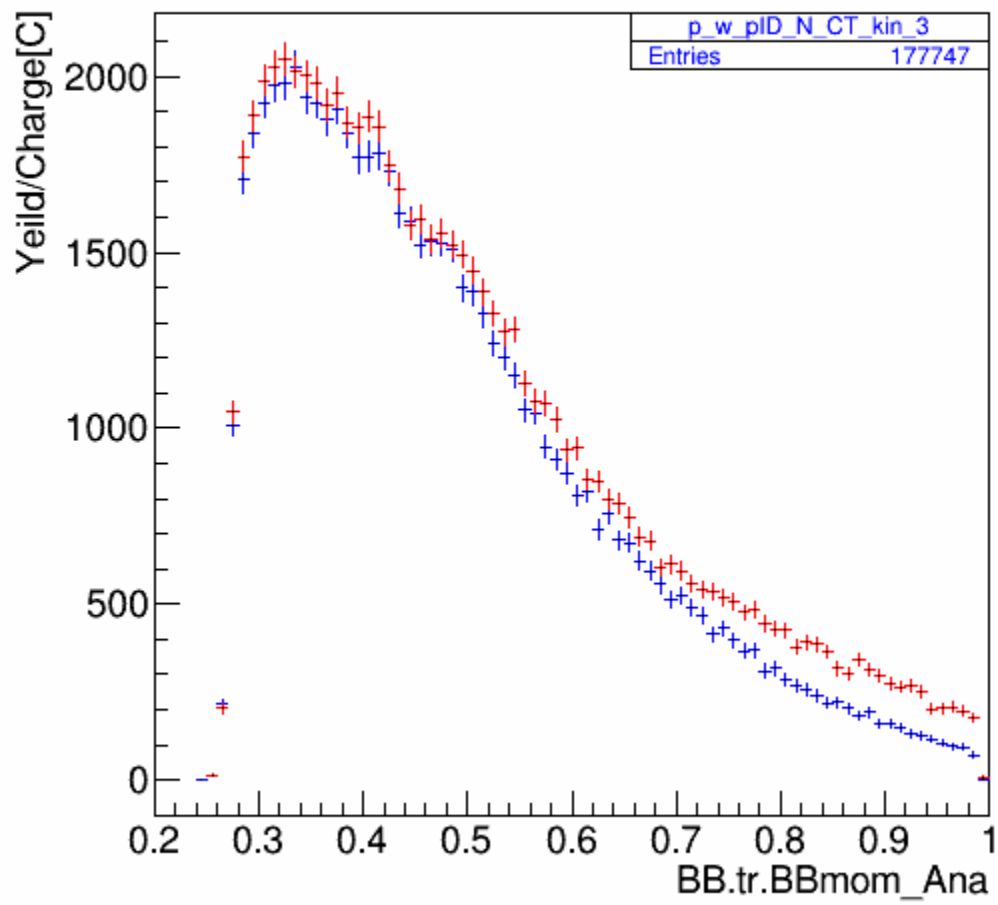


2.1 Kin12 : Momentum Analytical



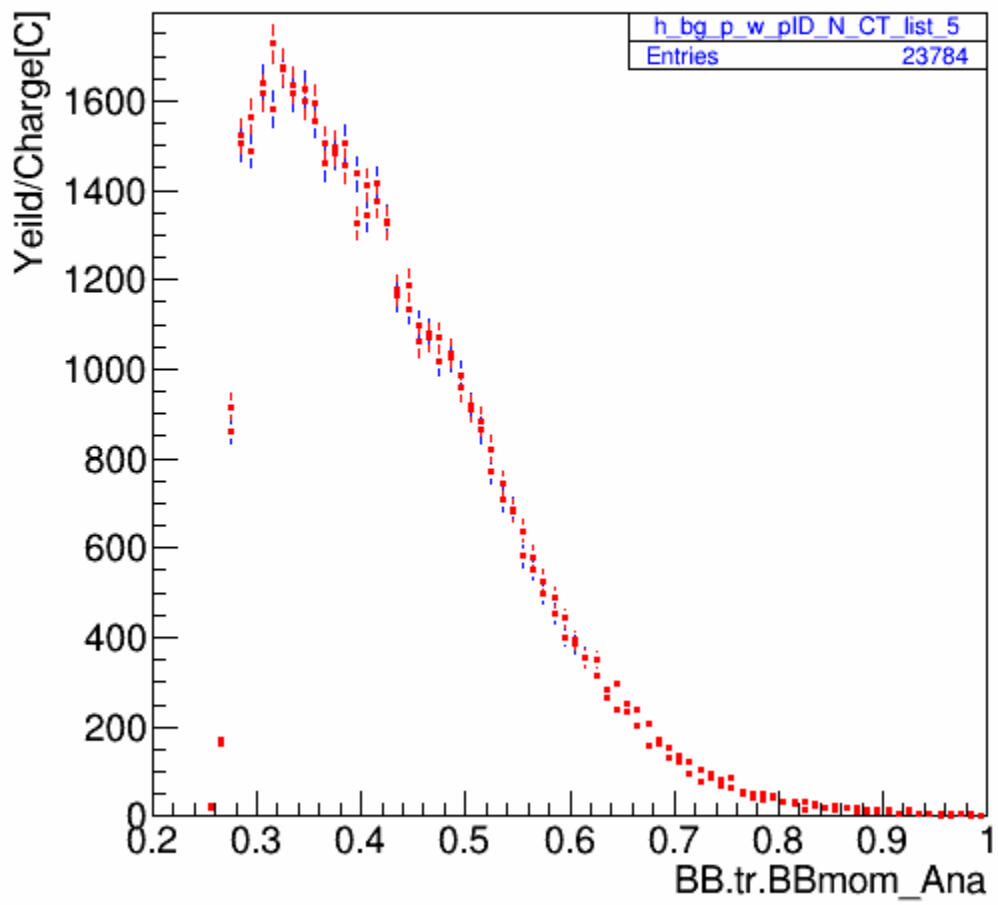
2.2 Kin3 : Momentum Analytical

p_w_pID_N_CT_kin_12



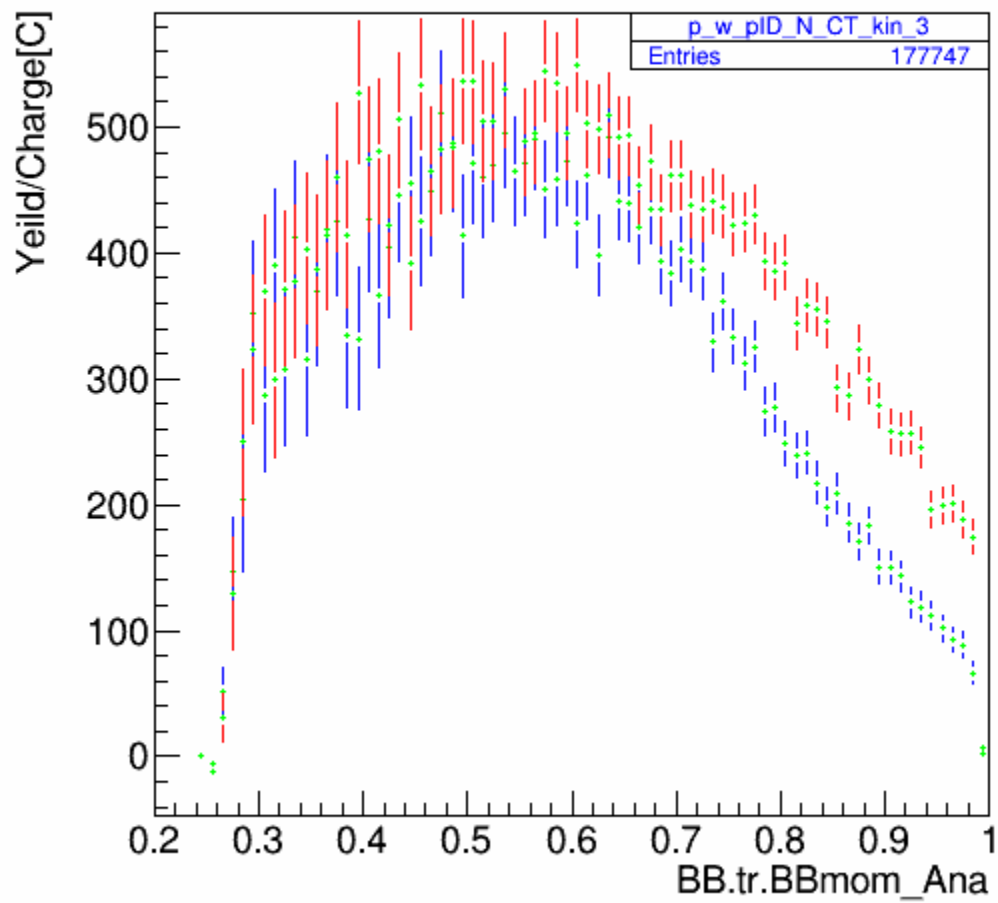
2.3 Momentum Analytical (peak)

bg_p_w_pID_N_CT_kin_12



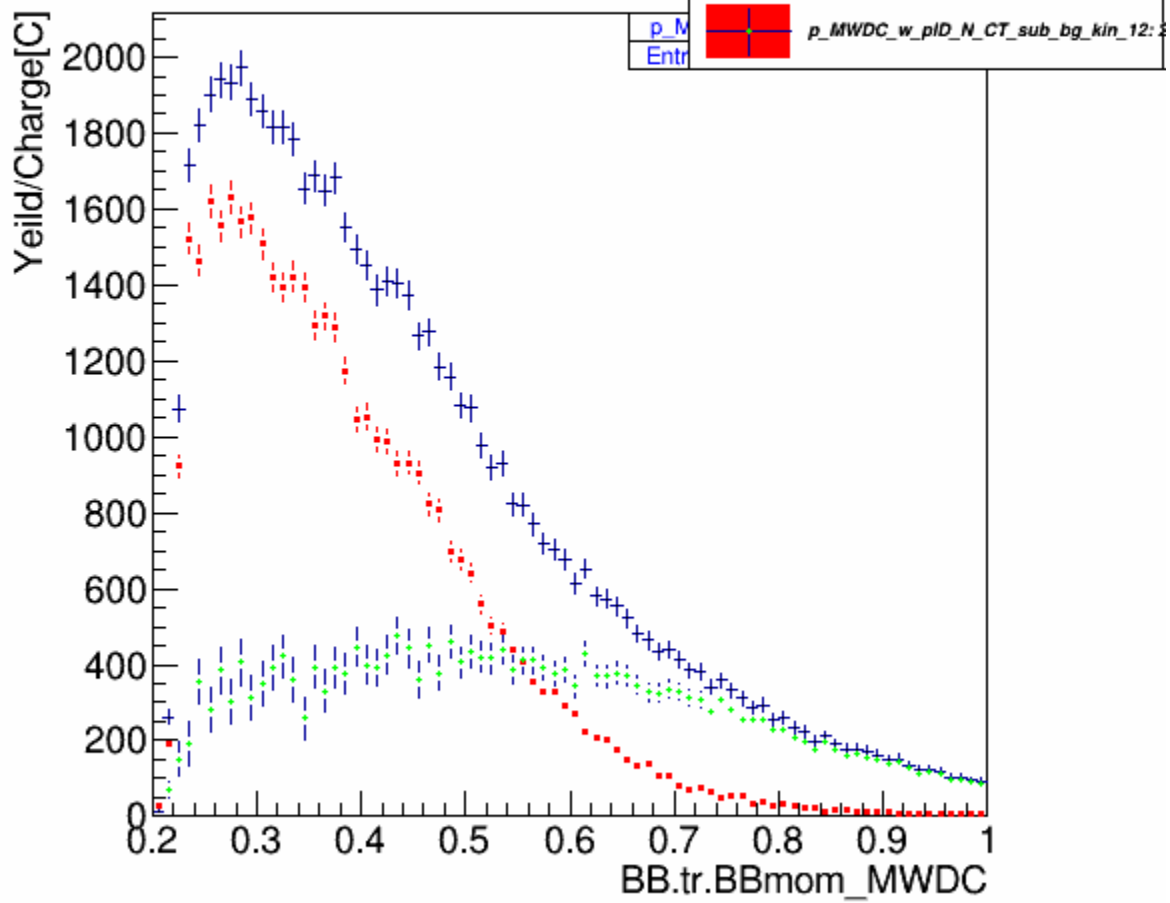
2.4 Momentum Analytical (background)

p_w_pID_N_CT_sub_bg_kin_12



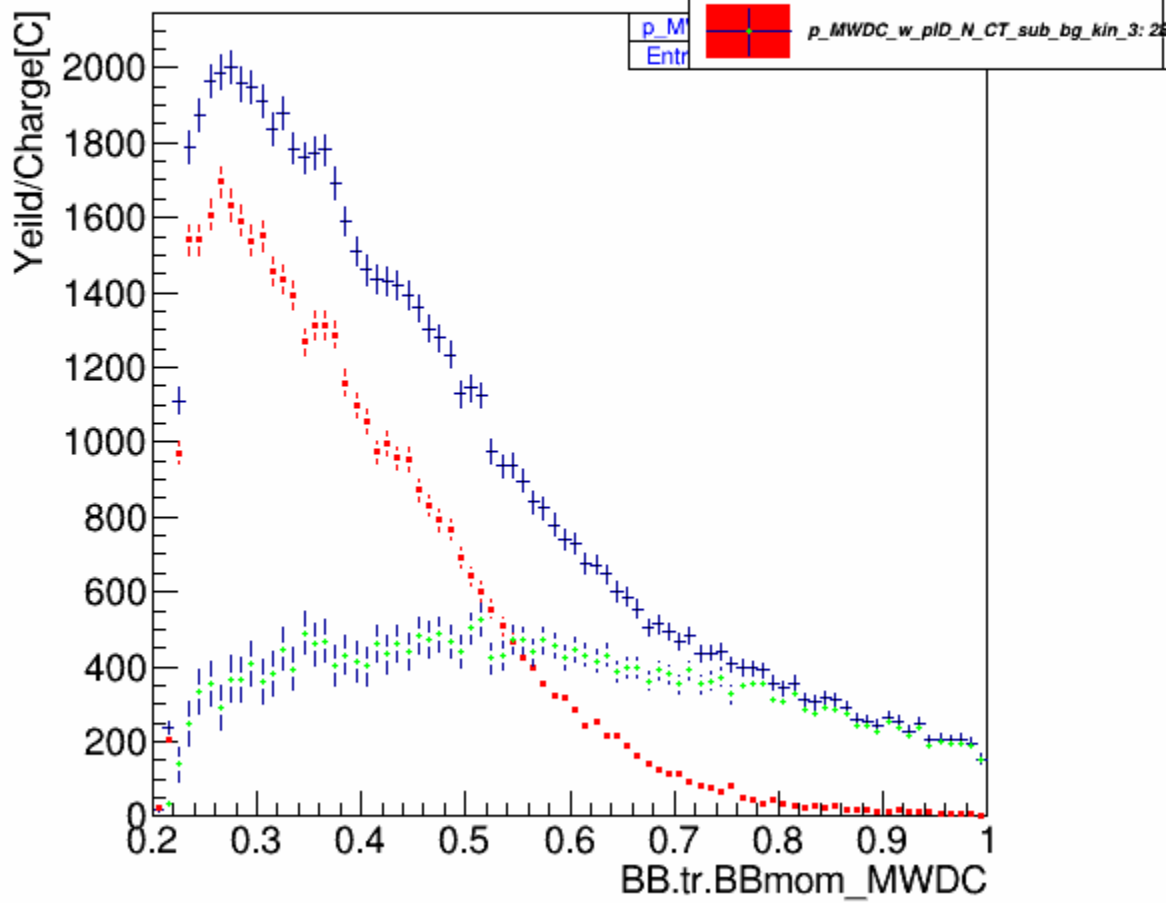
2.5 Momentum Analytical (peak sub background)

p_MWDC_w_pID_N_CT_kin_12



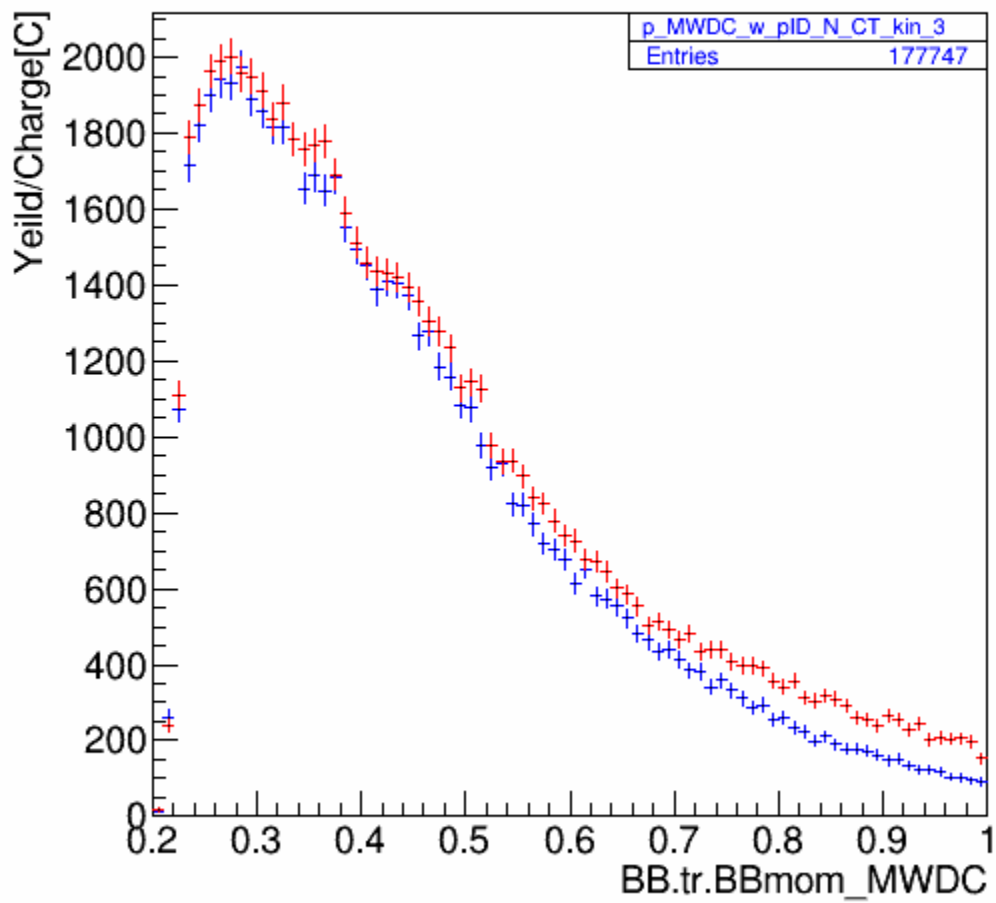
3.1 (kin12)Momentum Correction

p_MWDC_w_pID_N_CT_kin_3



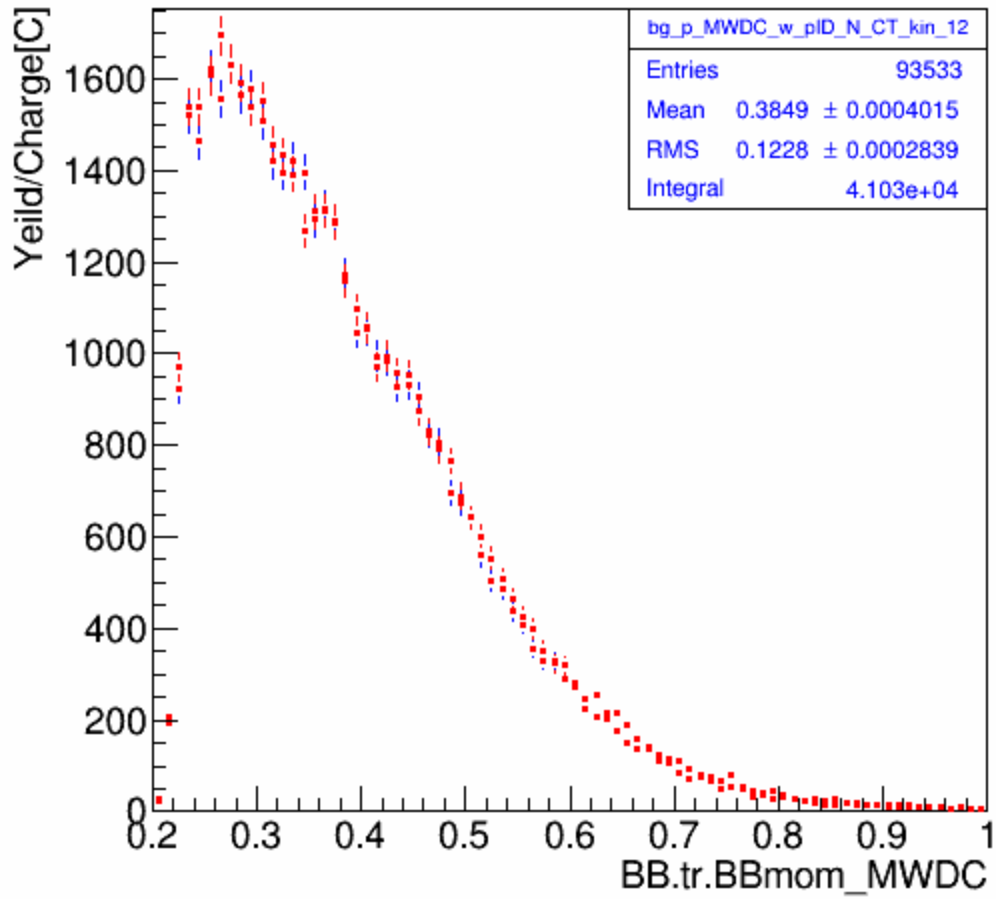
3.2 (kin 3) Momentum Correction

p_MWDC_w_pID_N_CT_kin_12



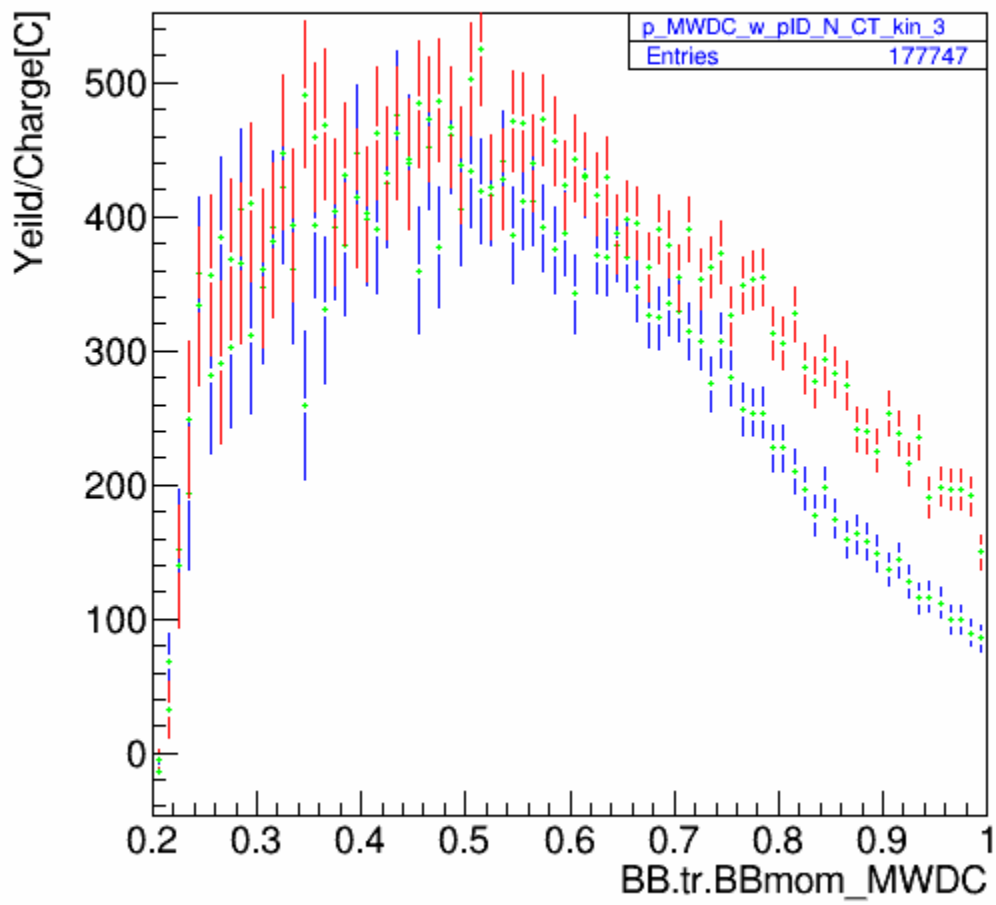
3.3 (peak)Momentum Correction

g_p_MWDC_w_pID_N_CT_kin_12



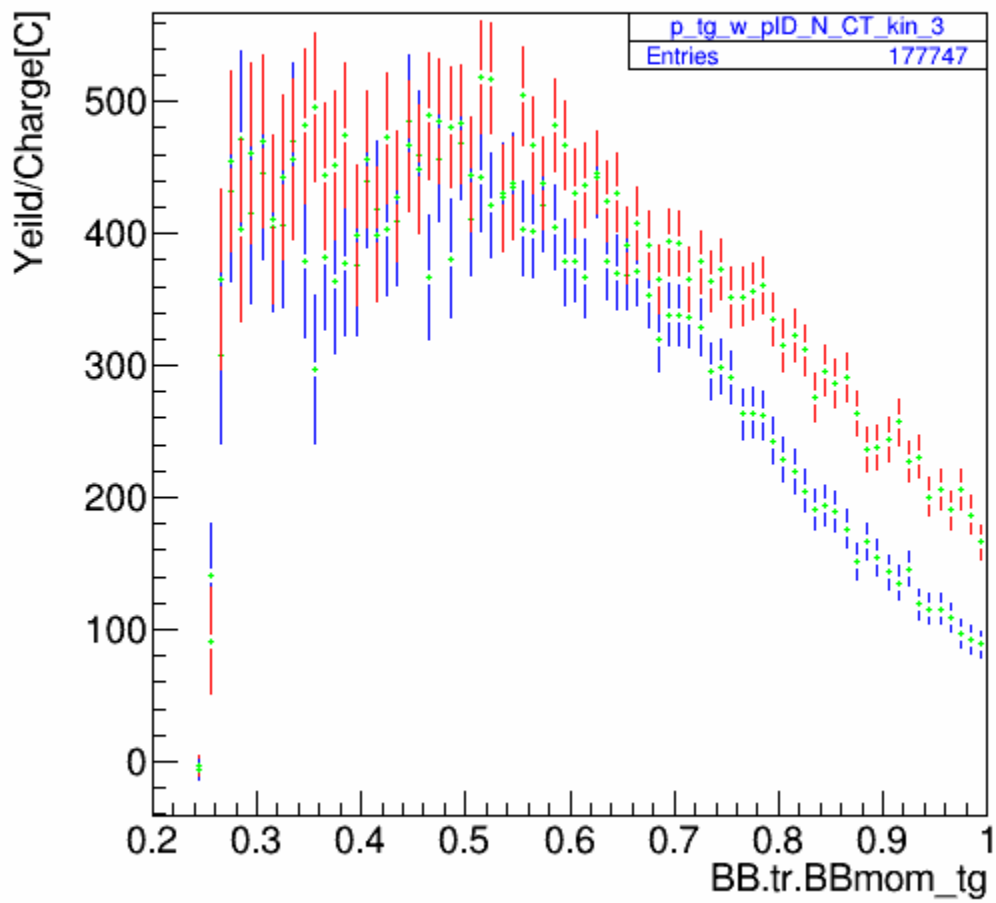
3.4 (bg) Momentum Correction

MWDC_w_pID_N_CT_sub_bg_kin_12



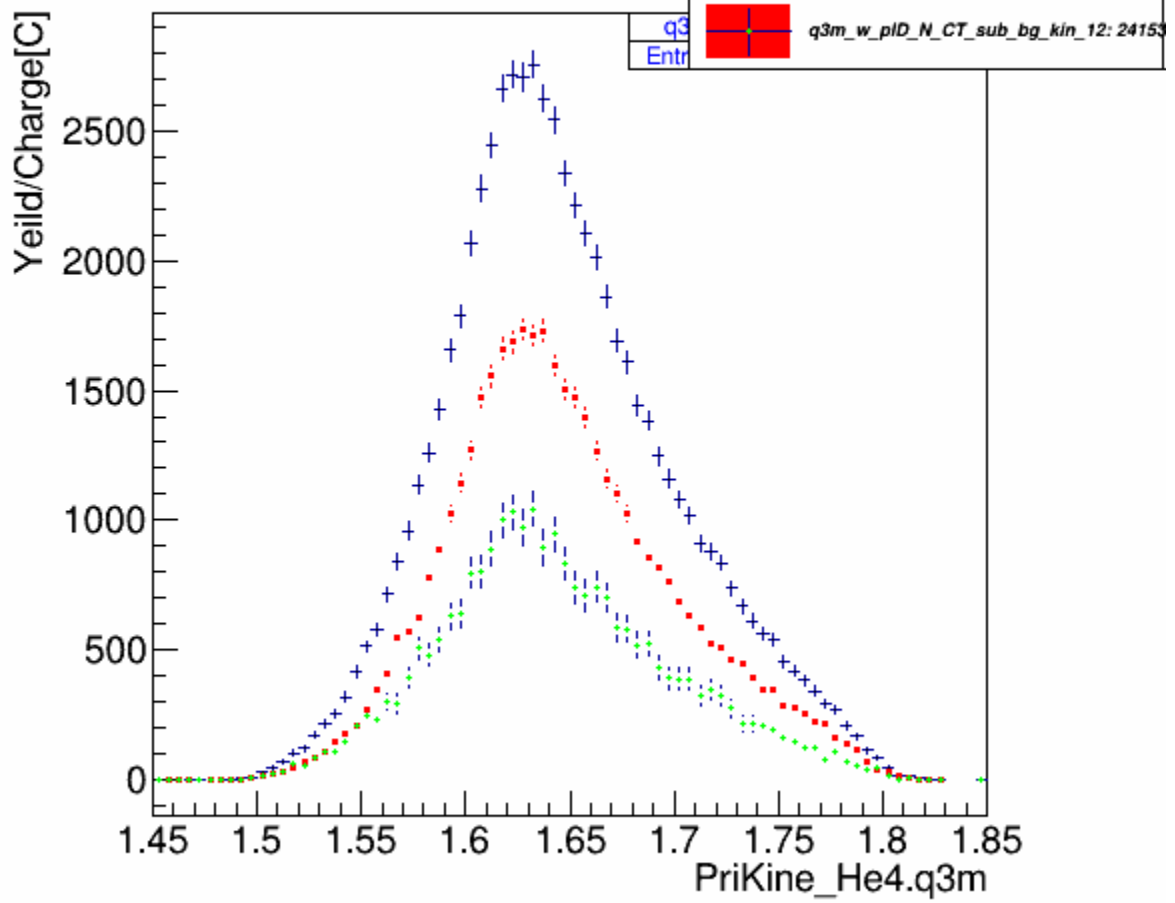
3.5 (peak sub bg) Momentum Correction

p_tg_w_pID_N_CT_sub_bg_kin_12

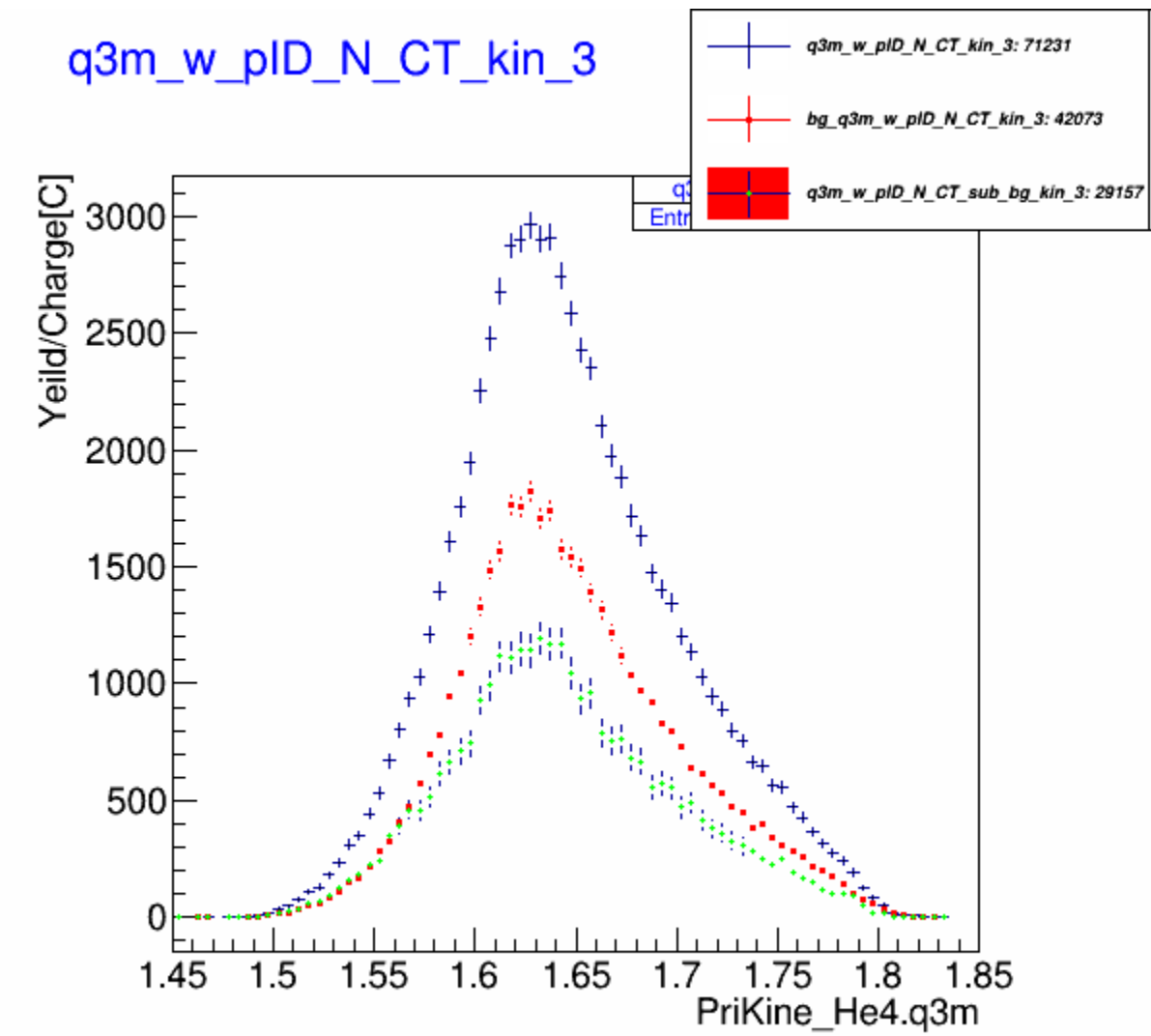


3.6 (peak sub bg) Target Momentum

q3m_w_pID_N_CT_kin_12

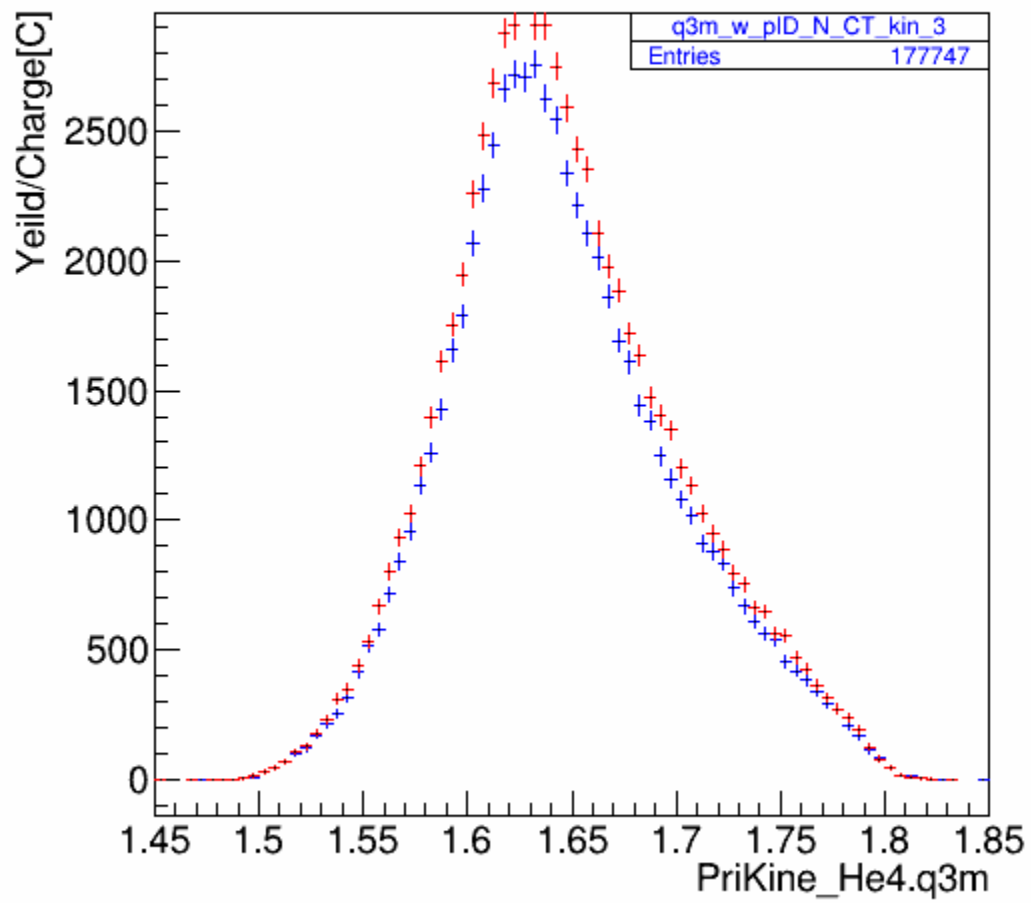


4.1 (kin12) |q|



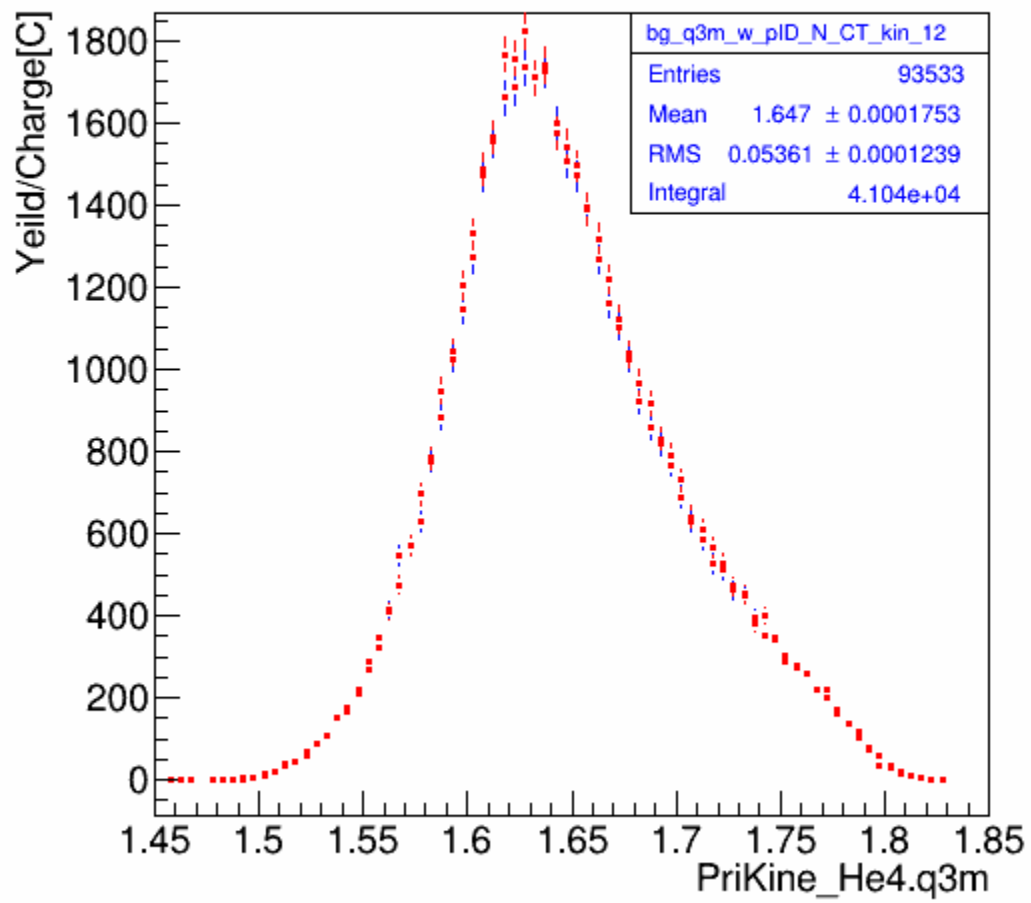
4.2 (kin3) |q|

q3m_w_pID_N_CT_kin_12



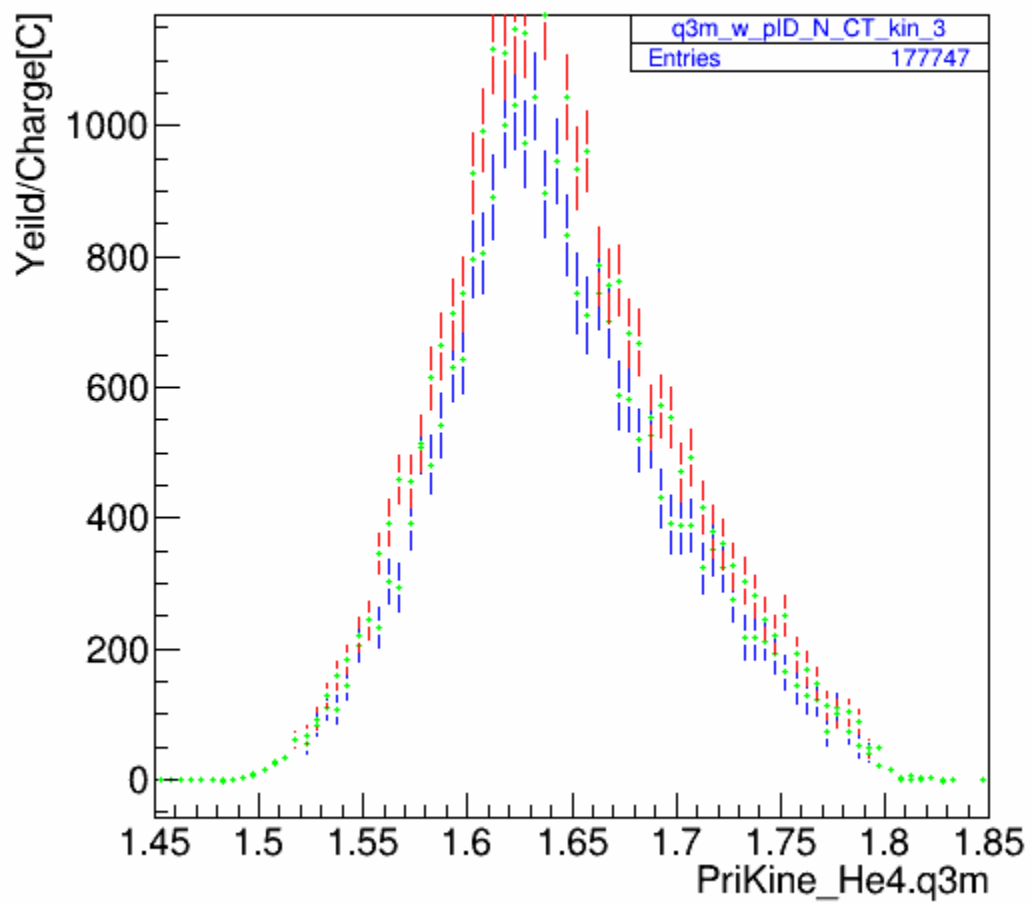
4.3 (peak) |q|

bg_q3m_w_pID_N_CT_kin_12



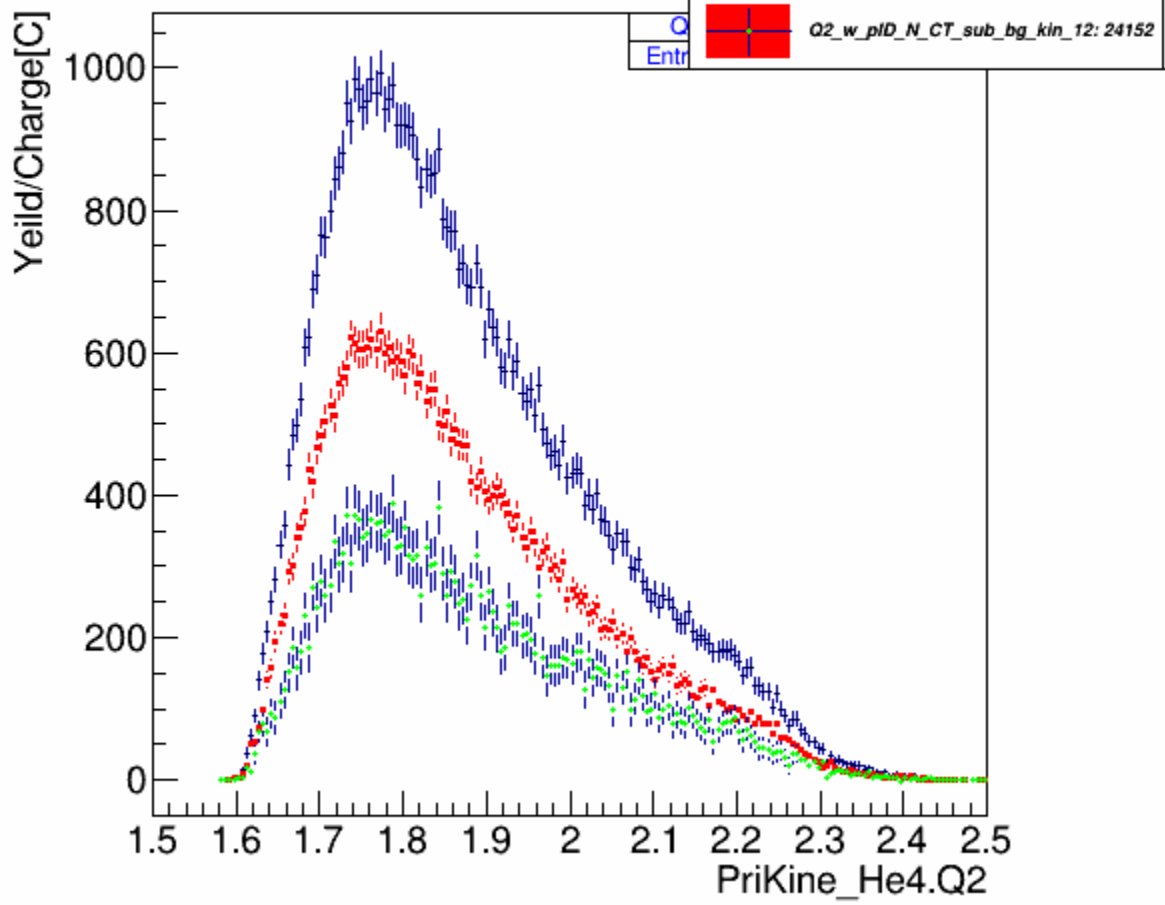
4.4 (bg) |q|

|3m_w_pID_N_CT_sub_bg_kin_12



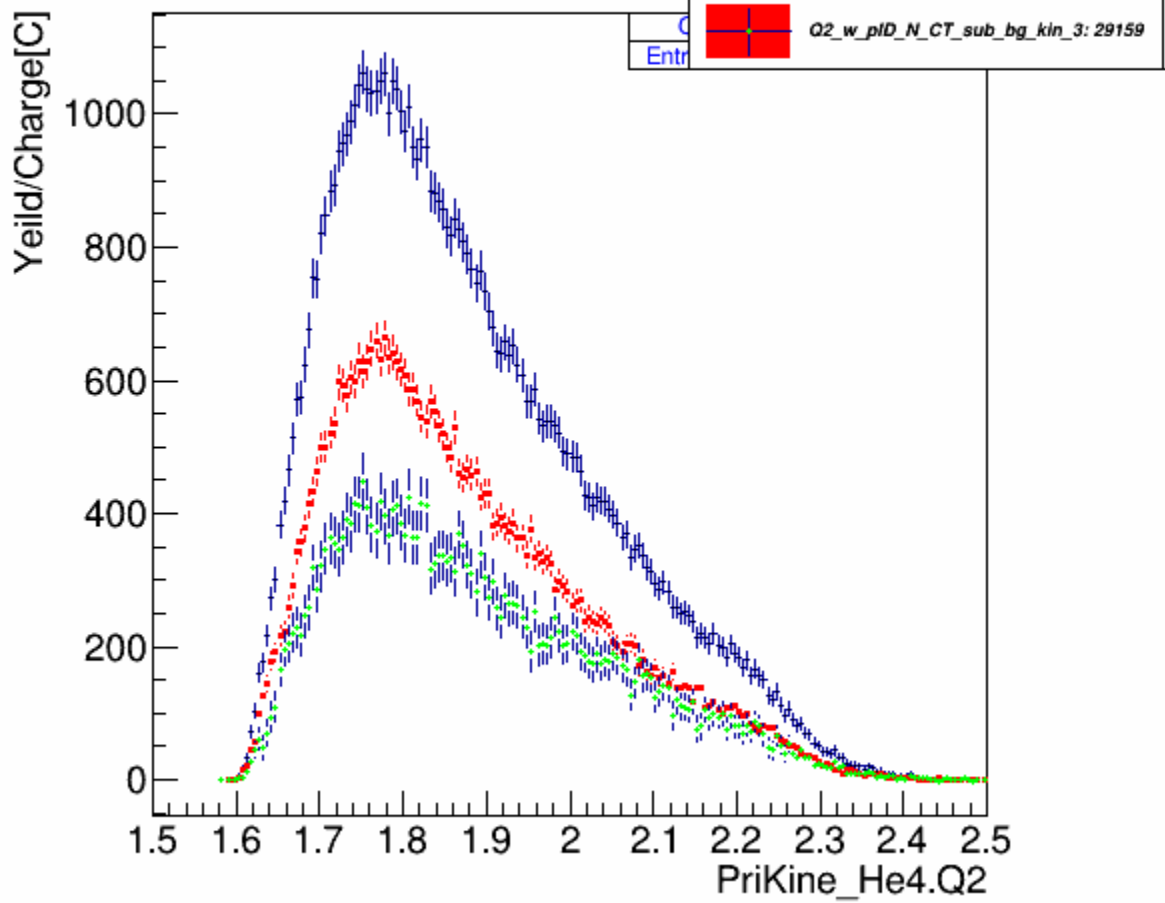
4.5 (peak sub bg) q3m

Q2_w_pID_N_CT_kin_12



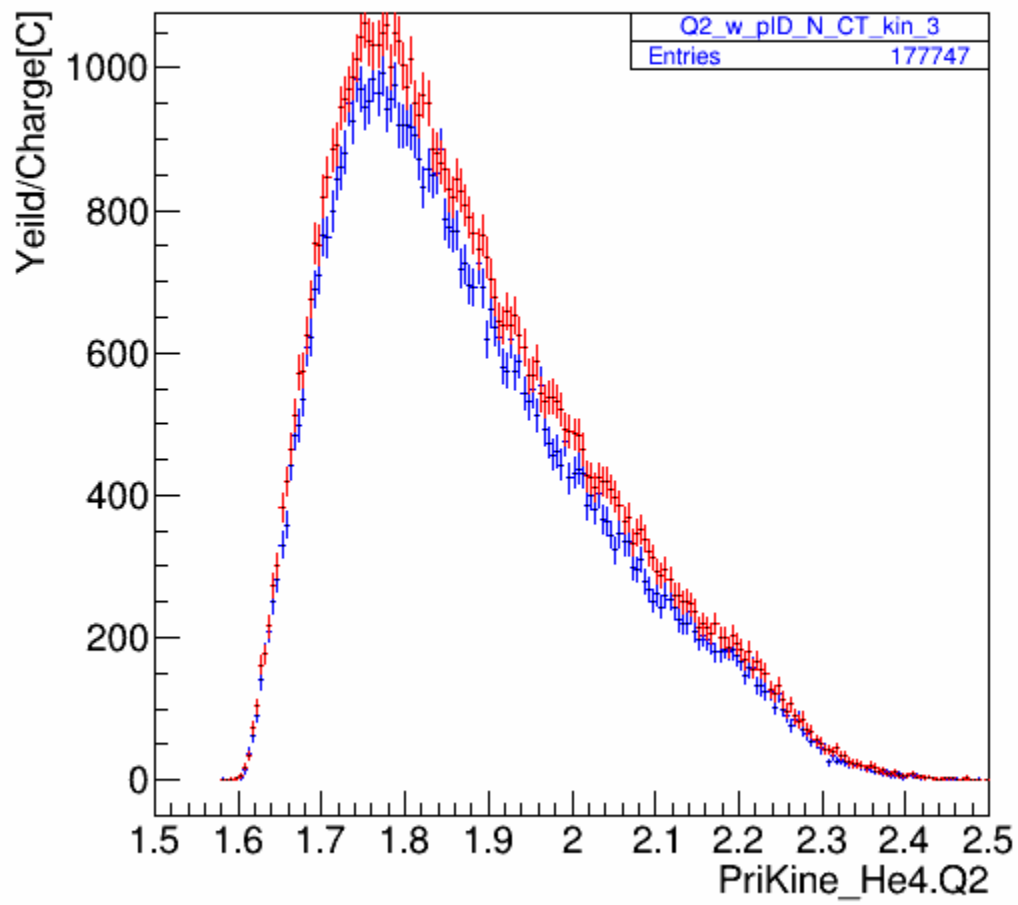
5.1 (kin12) Q2

Q2_w_pID_N_CT_kin_3



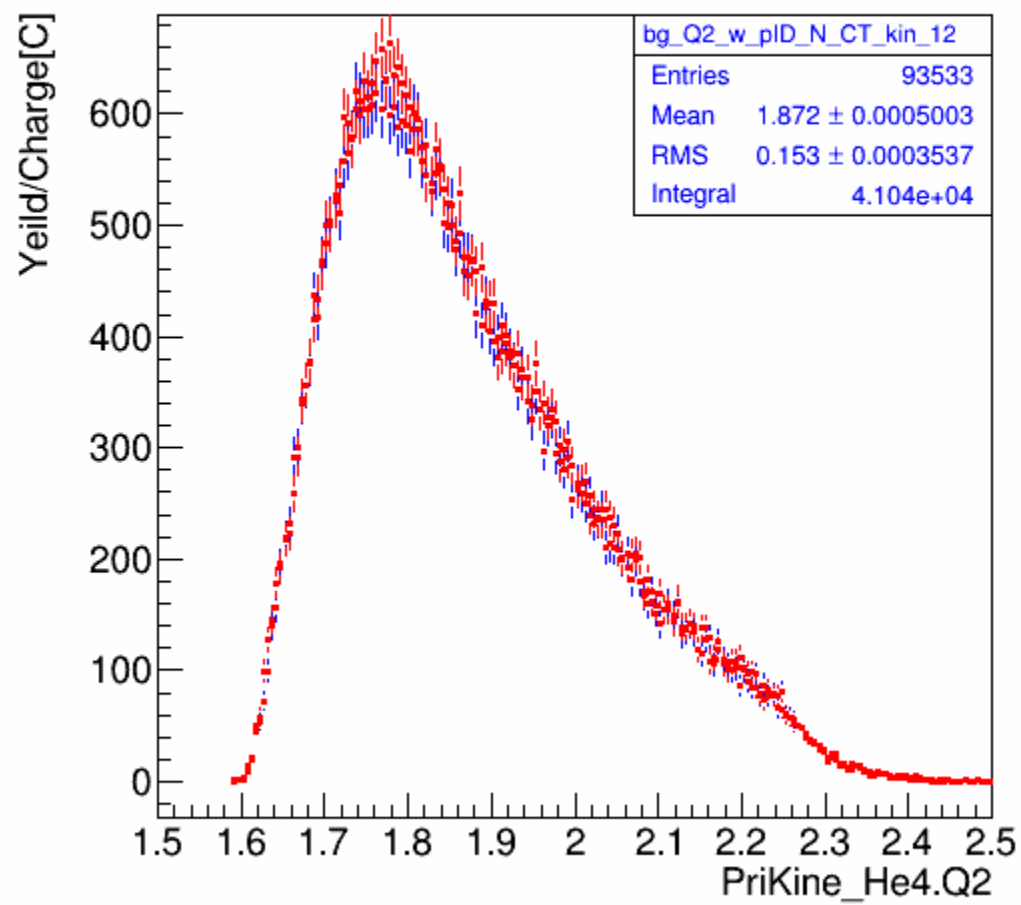
5. 2 (kin3) Q2

Q2_w_pID_N_CT_kin_12



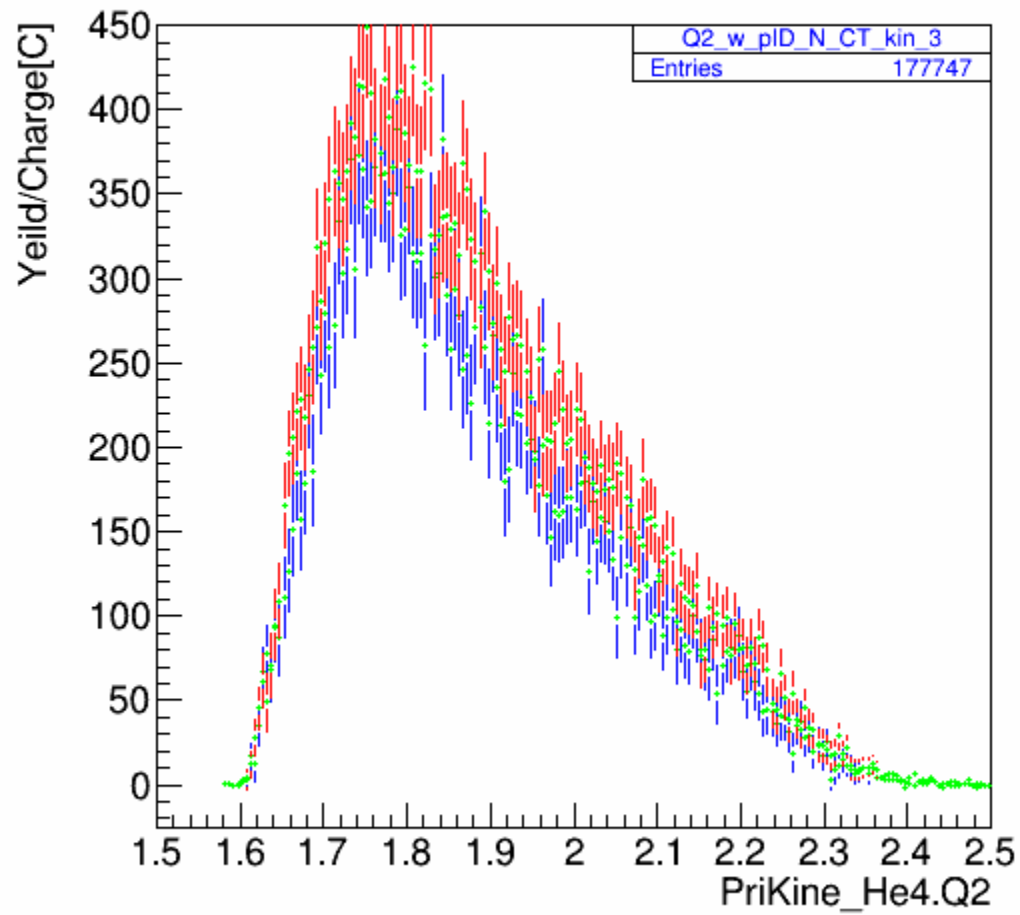
5.3 (peak) Q2

bg_Q2_w_pID_N_CT_kin_12



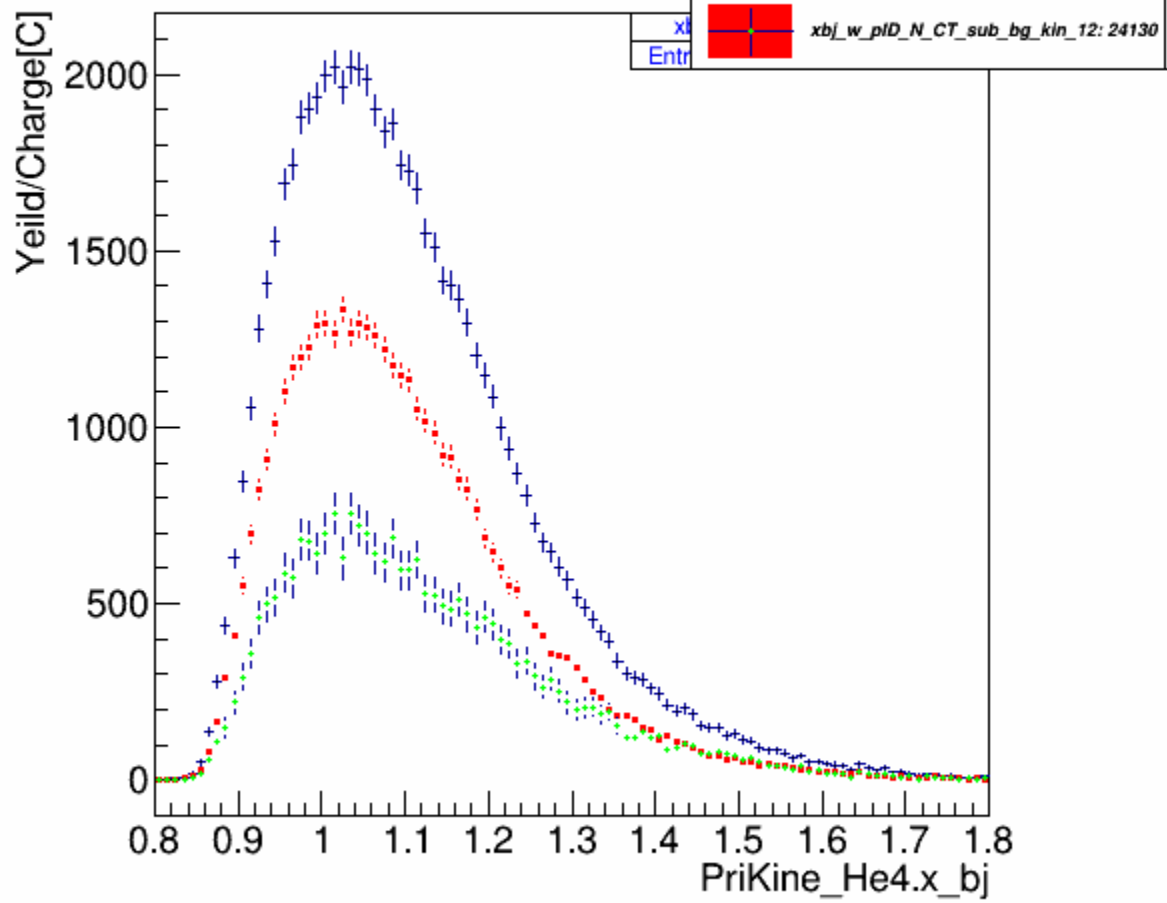
5.4 (bg) Q2

Q2_w_pID_N_CT_sub_bg_kin_12



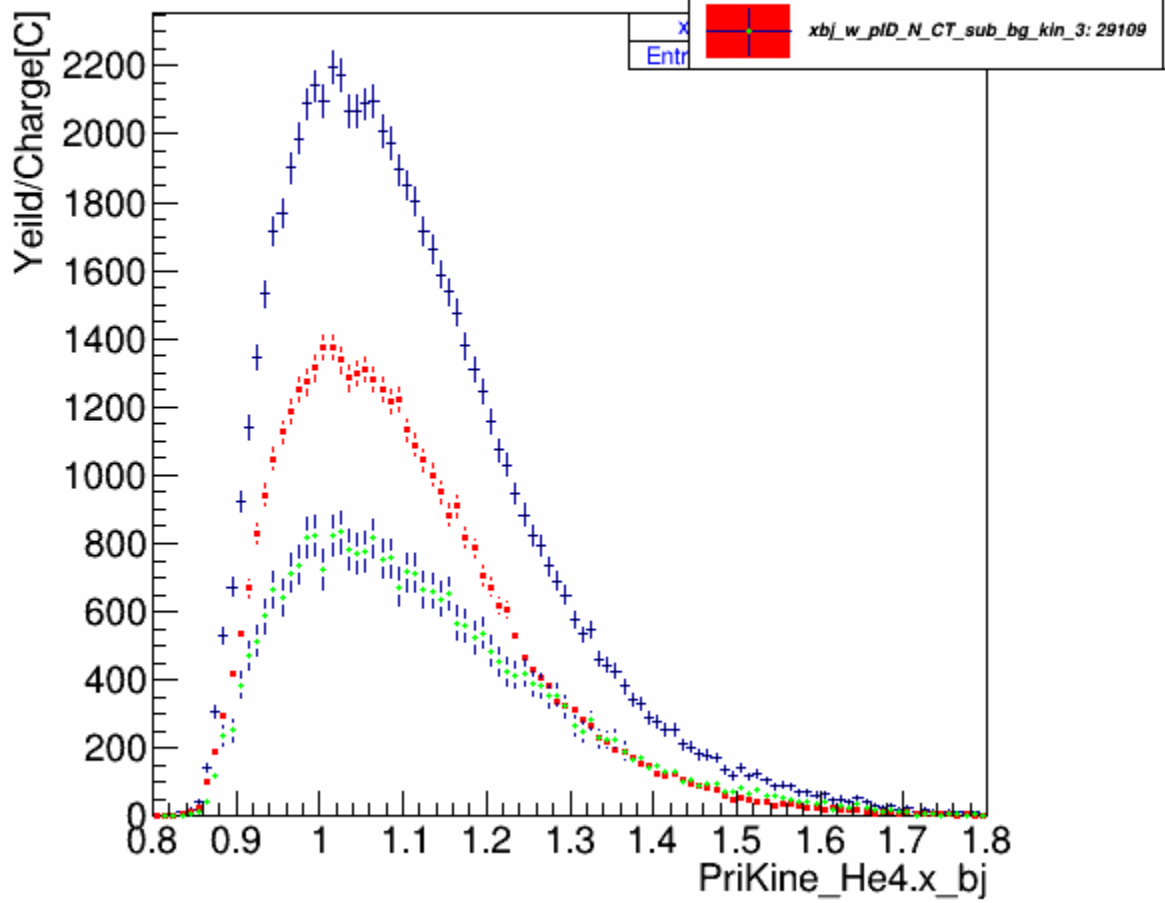
5.5 (peak sub bg) Q2

xbj_w_pID_N_CT_kin_12



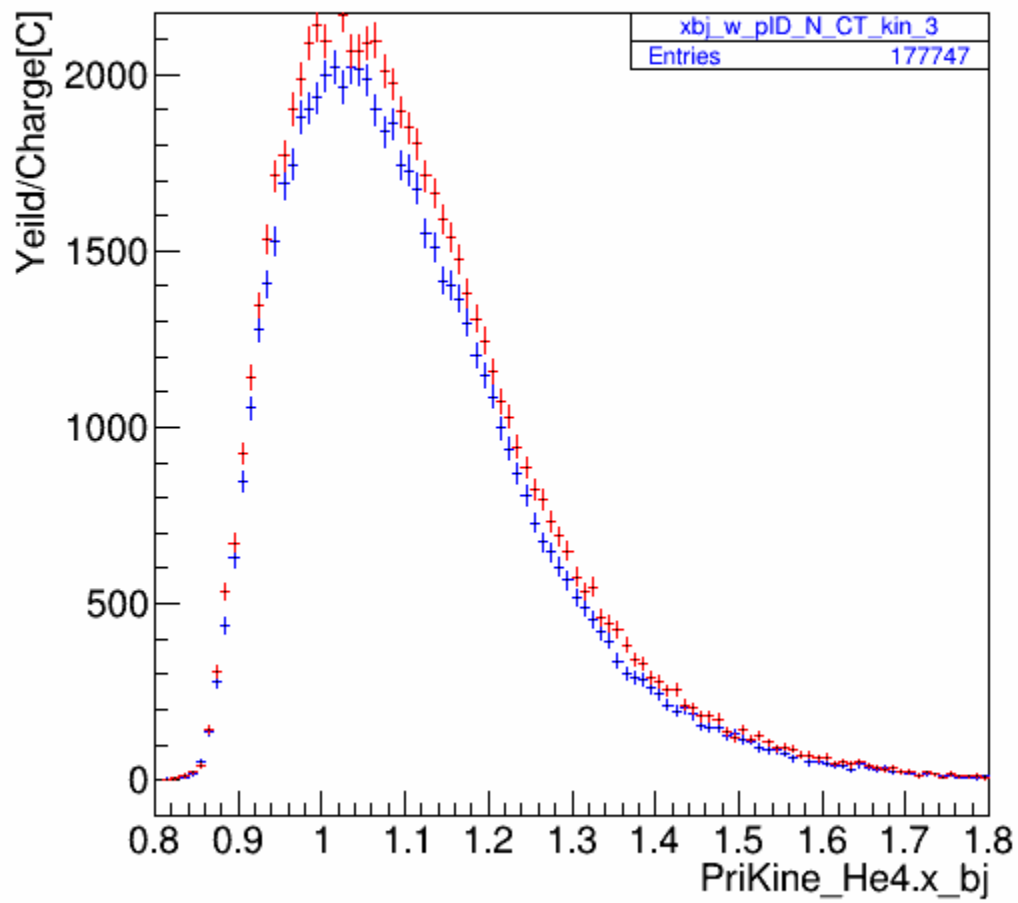
6.1 (kin12) xbj

xbj_w_pID_N_CT_kin_3



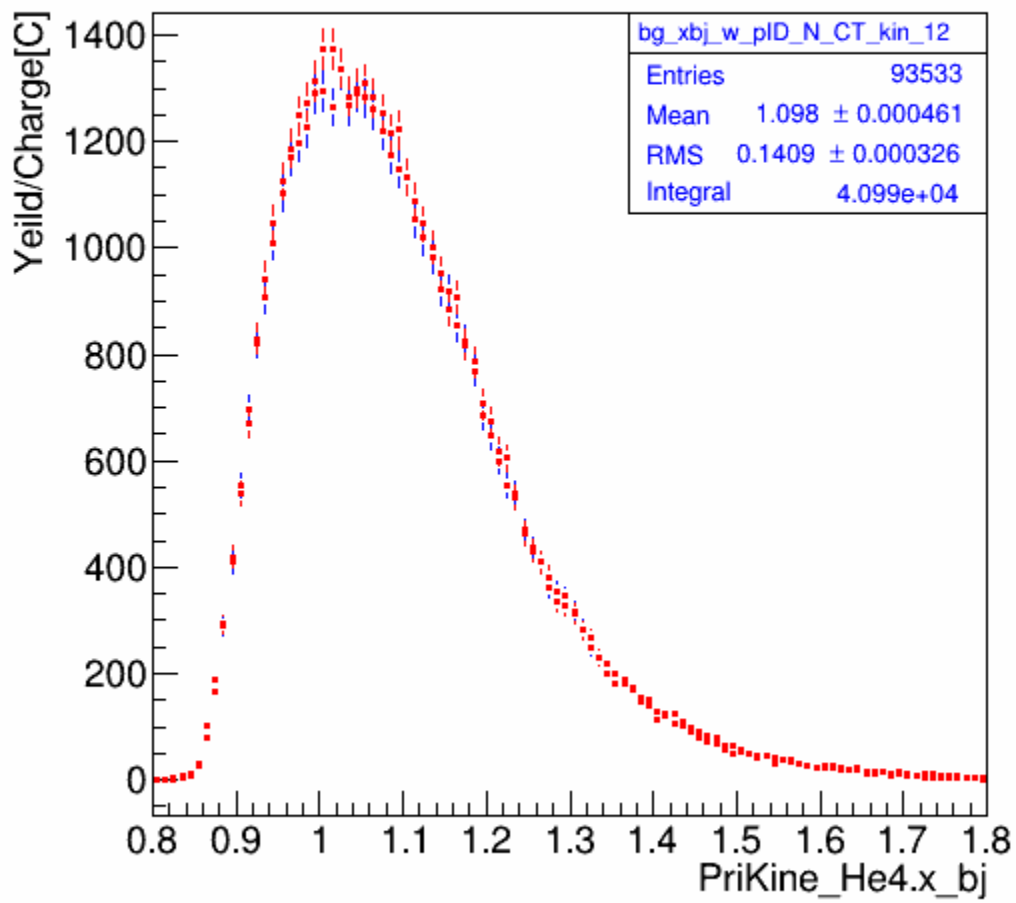
6.2 (kin3) xbj

xbj_w_pID_N_CT_kin_12



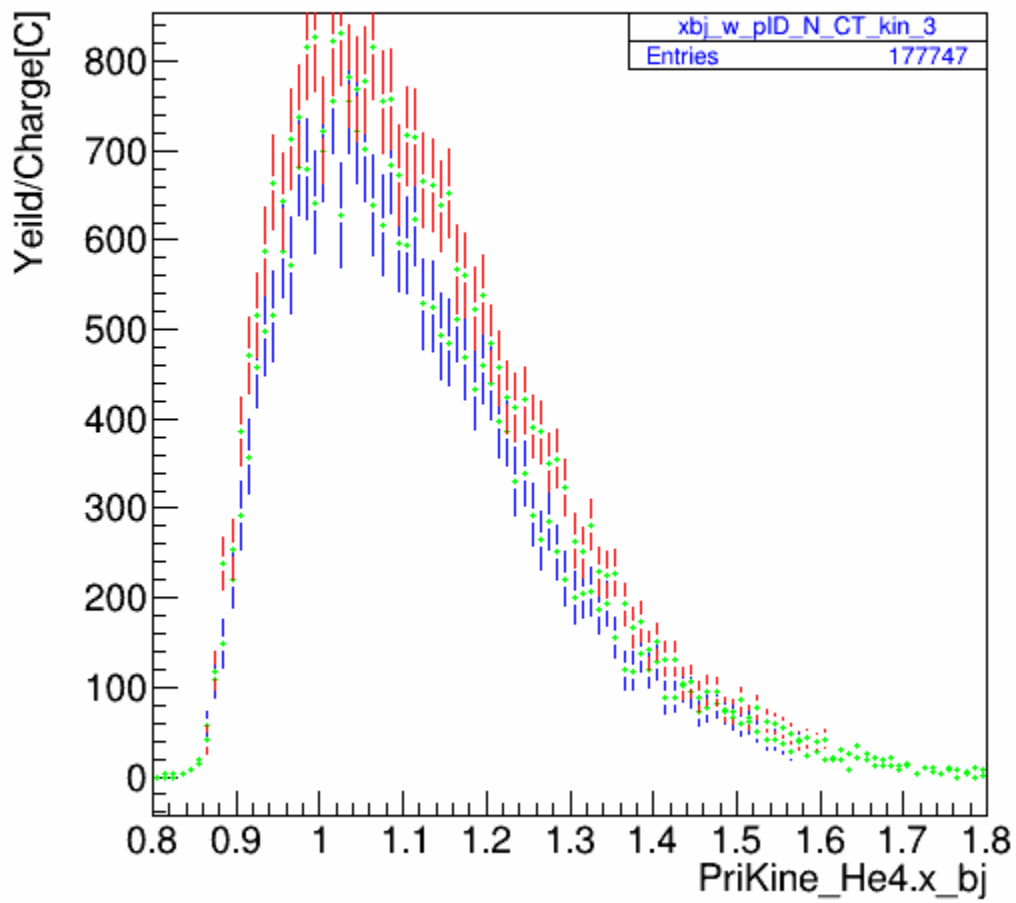
6.3 (peak) xbj

bg_xbj_w_pID_N_CT_kin_12



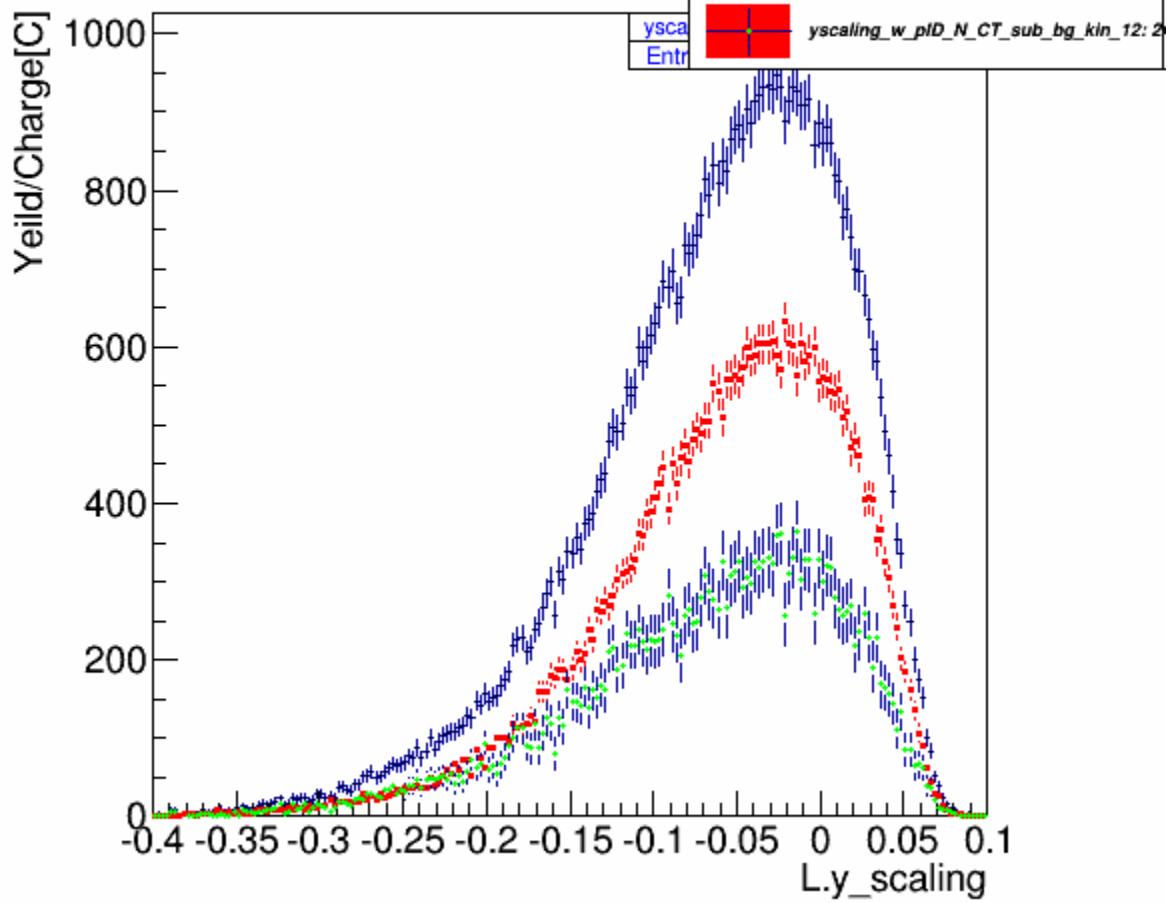
6.4 (bg) xbj

bj_w_pID_N_CT_sub_bg_kin_12



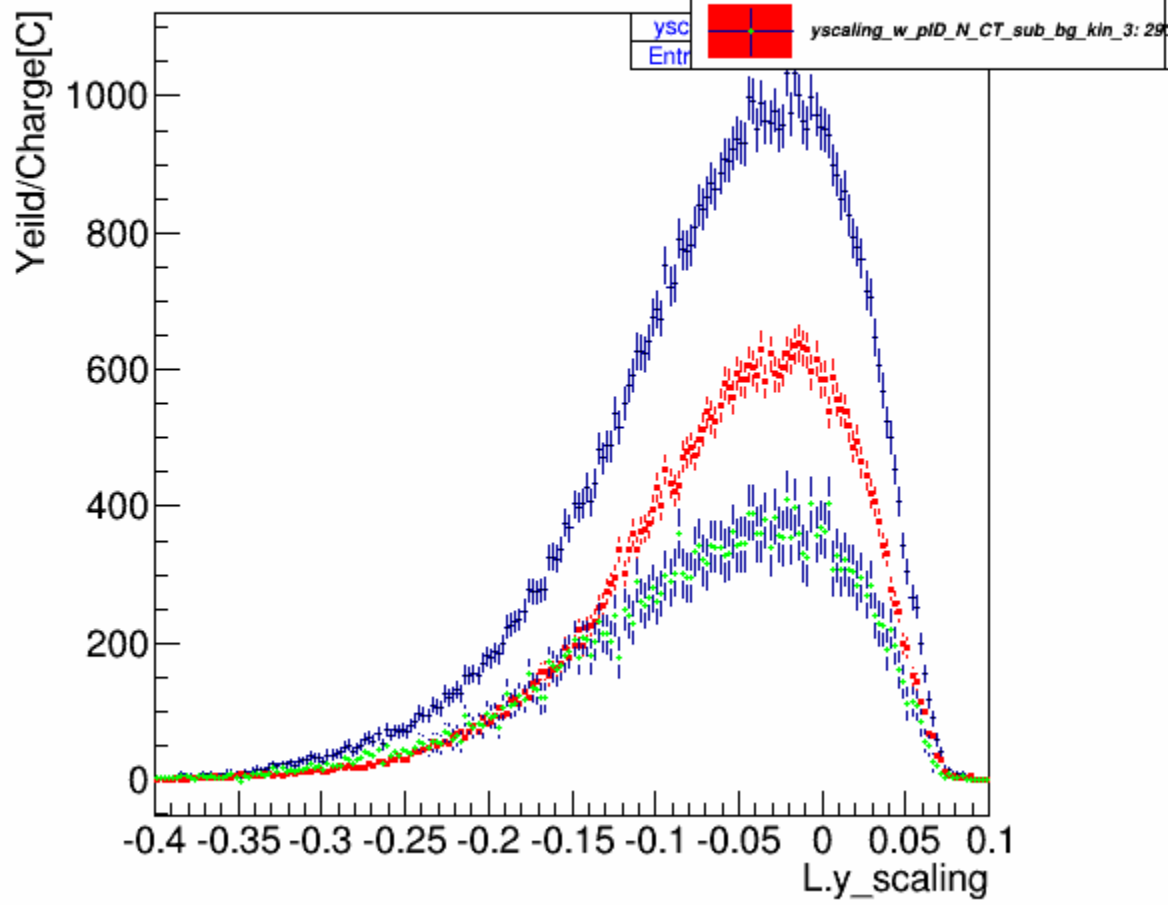
6.5 (peak sub bg) x_bj

yscaling_w_pID_N_CT_kin_12



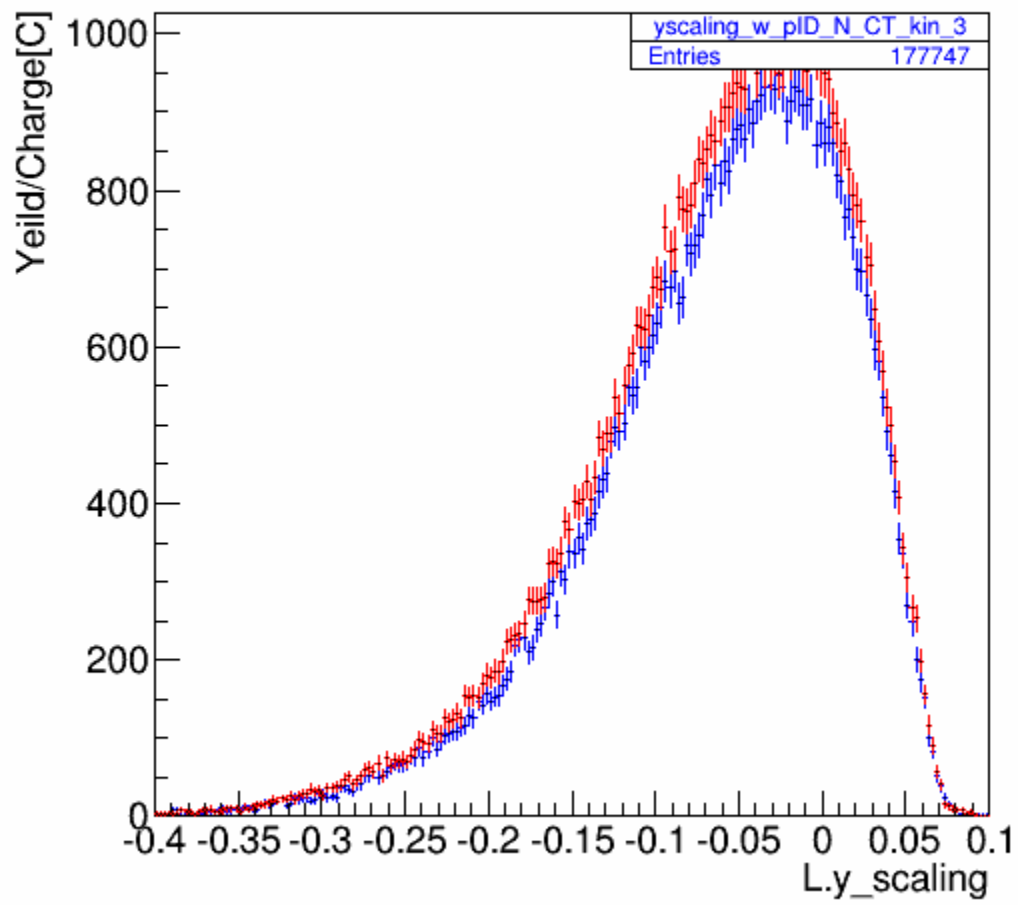
7.1 (kin12) y_scaling

yscaling_w_pID_N_CT_kin_3



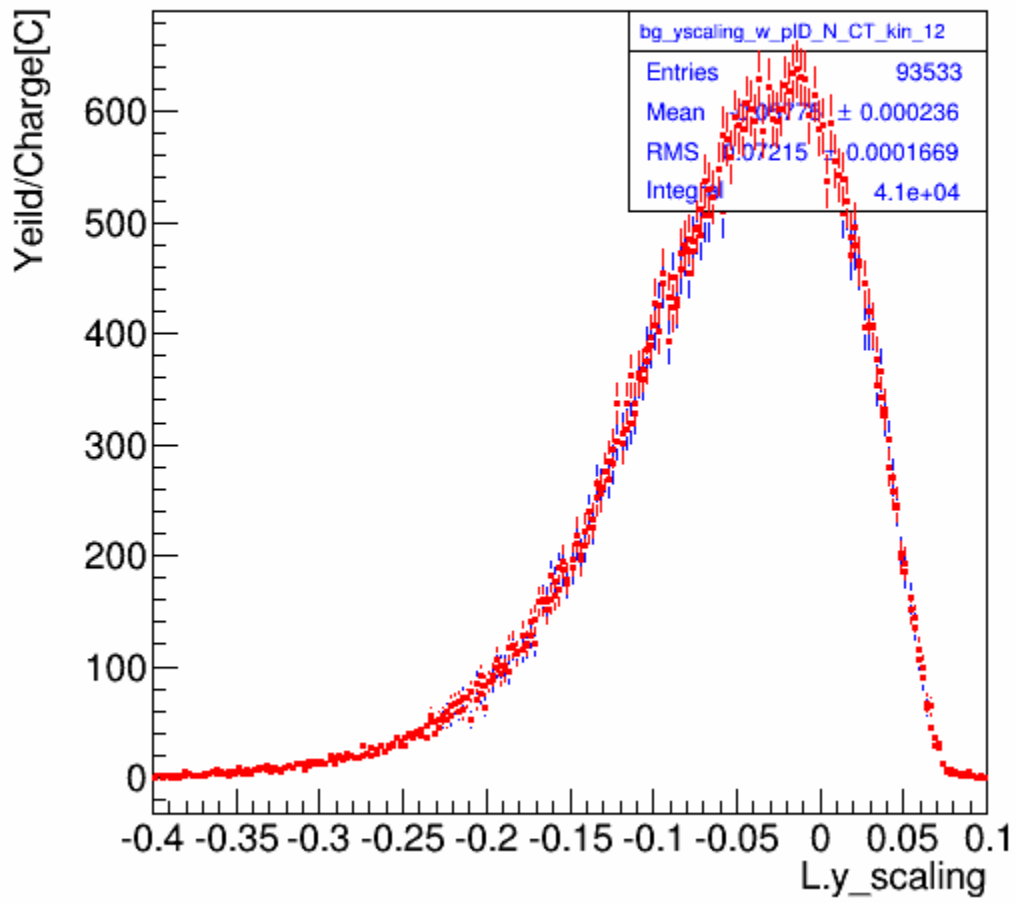
7.2 (kin3) y_scaling

yscaling_w_pID_N_CT_kin_12



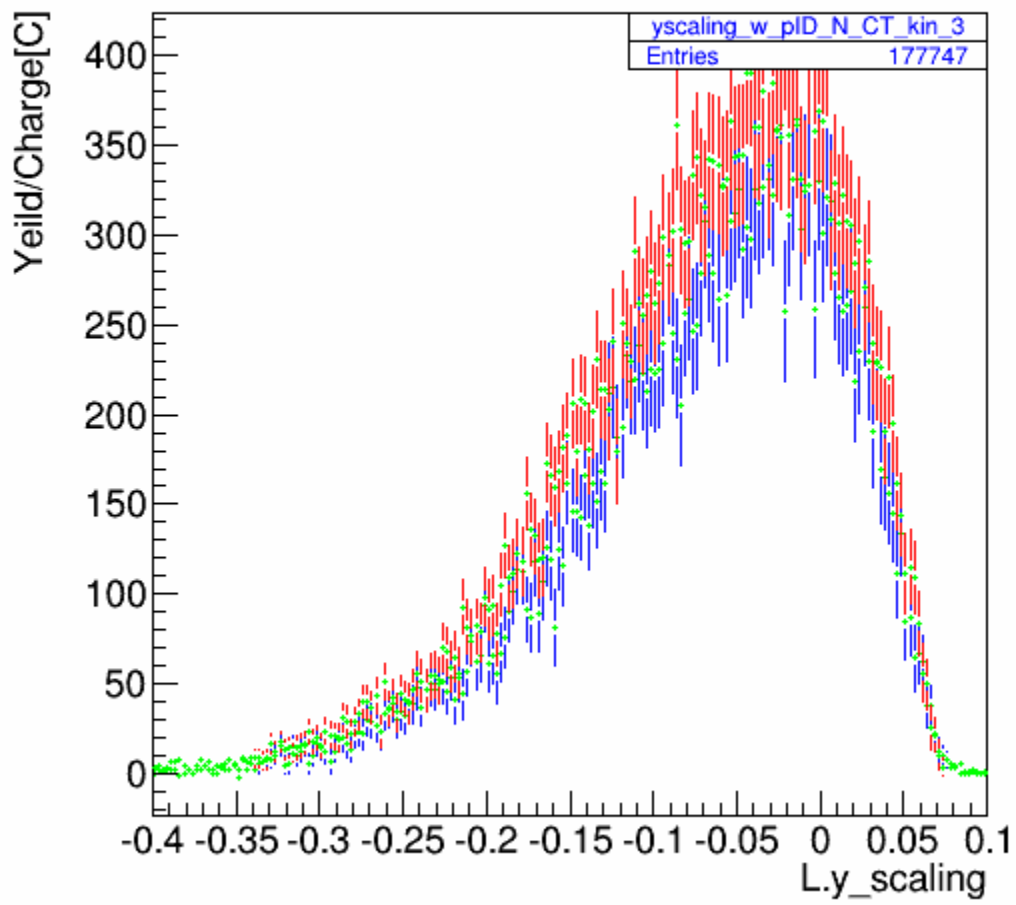
7.3 (peak) $y_scaling$

bg_yscaling_w_pID_N_CT_kin_12



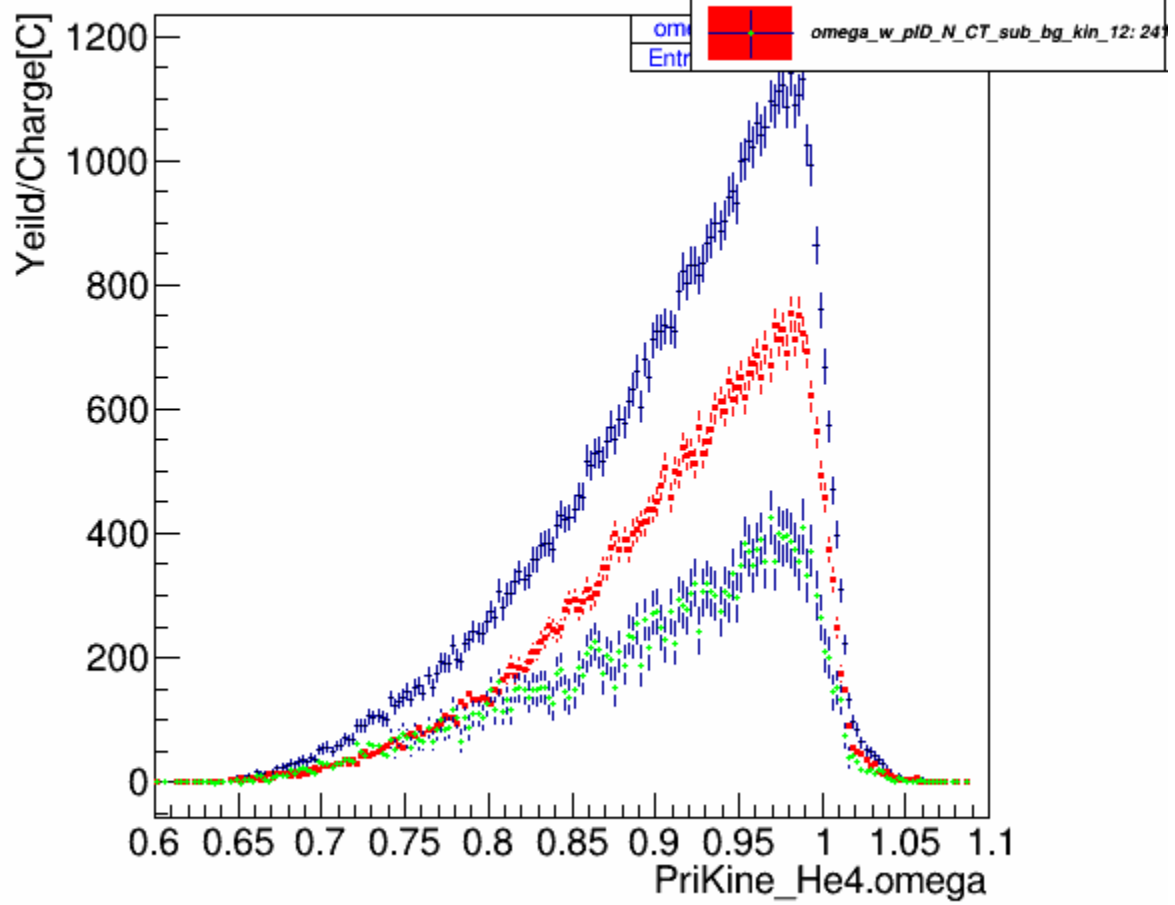
7.4 (bg) y_scaling

scaling_w_pID_N_CT_sub_bg_kin_12



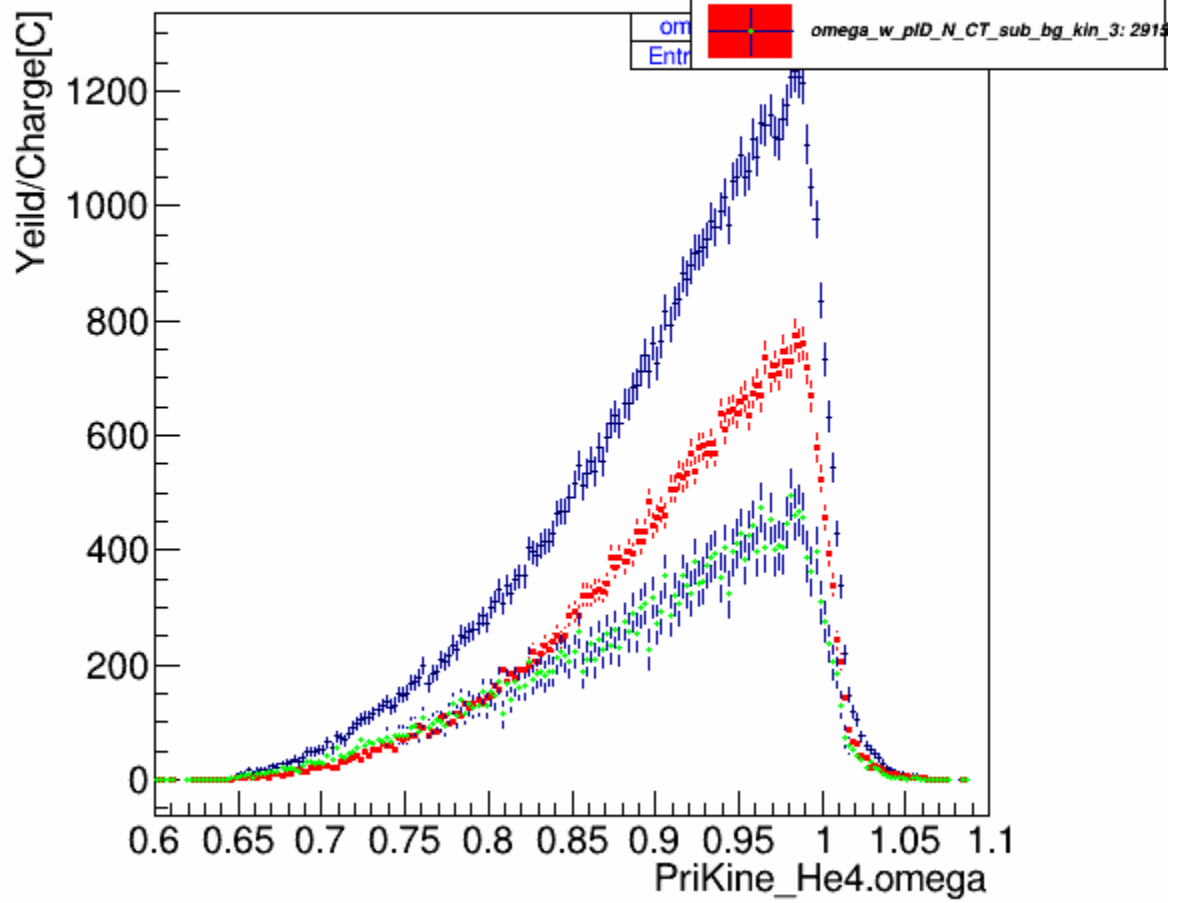
7.5 (peak sub bg) Y-scaling

omega_w_pID_N_CT_kin_12



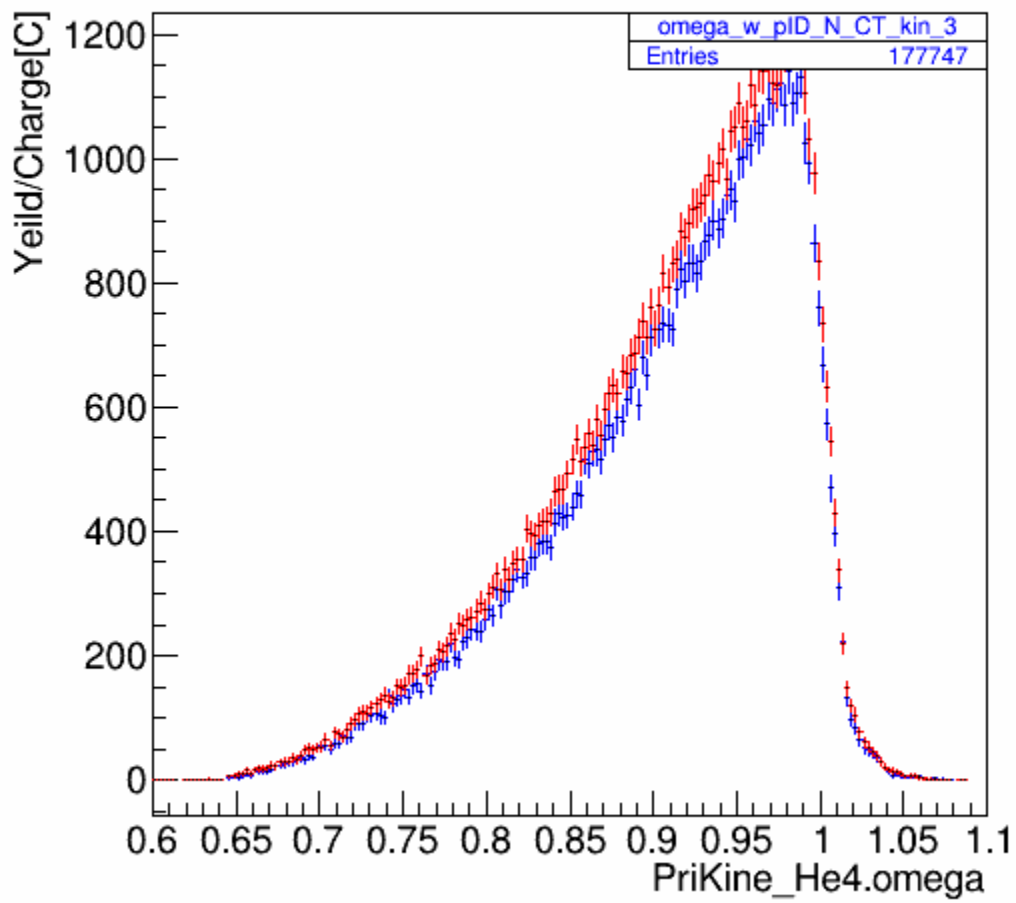
8.1 (kin12) Energy transfer

omega_w_pID_N_CT_kin_3



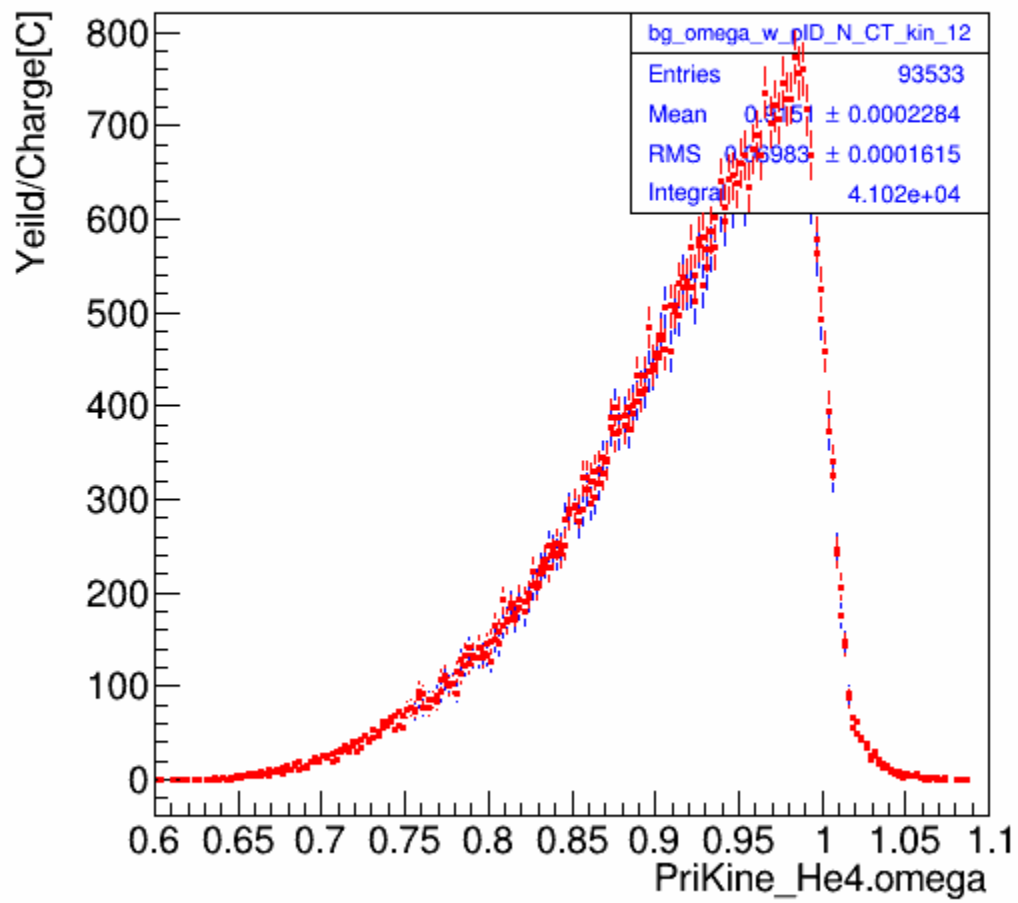
8.2 (kin3) Energy transfer

omega_w_pID_N_CT_kin_12



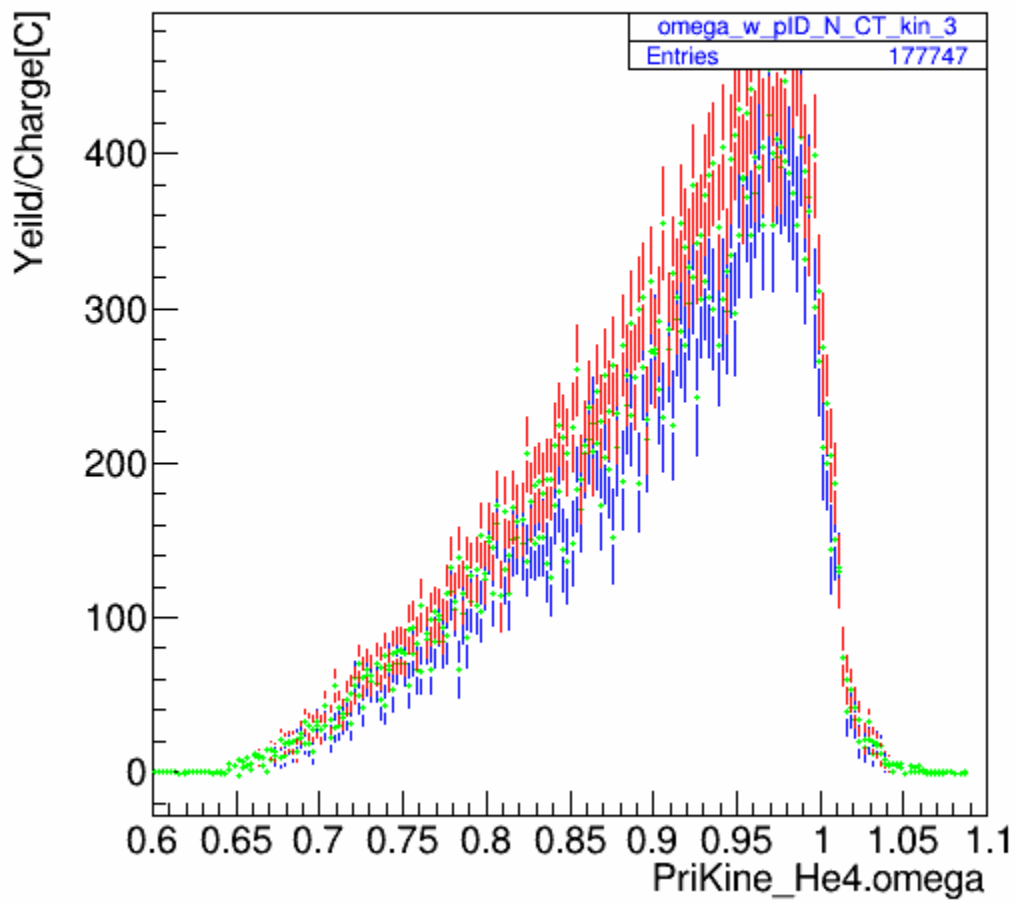
8.3 (peak) Energy transfer

og_omega_w_pID_N_CT_kin_12



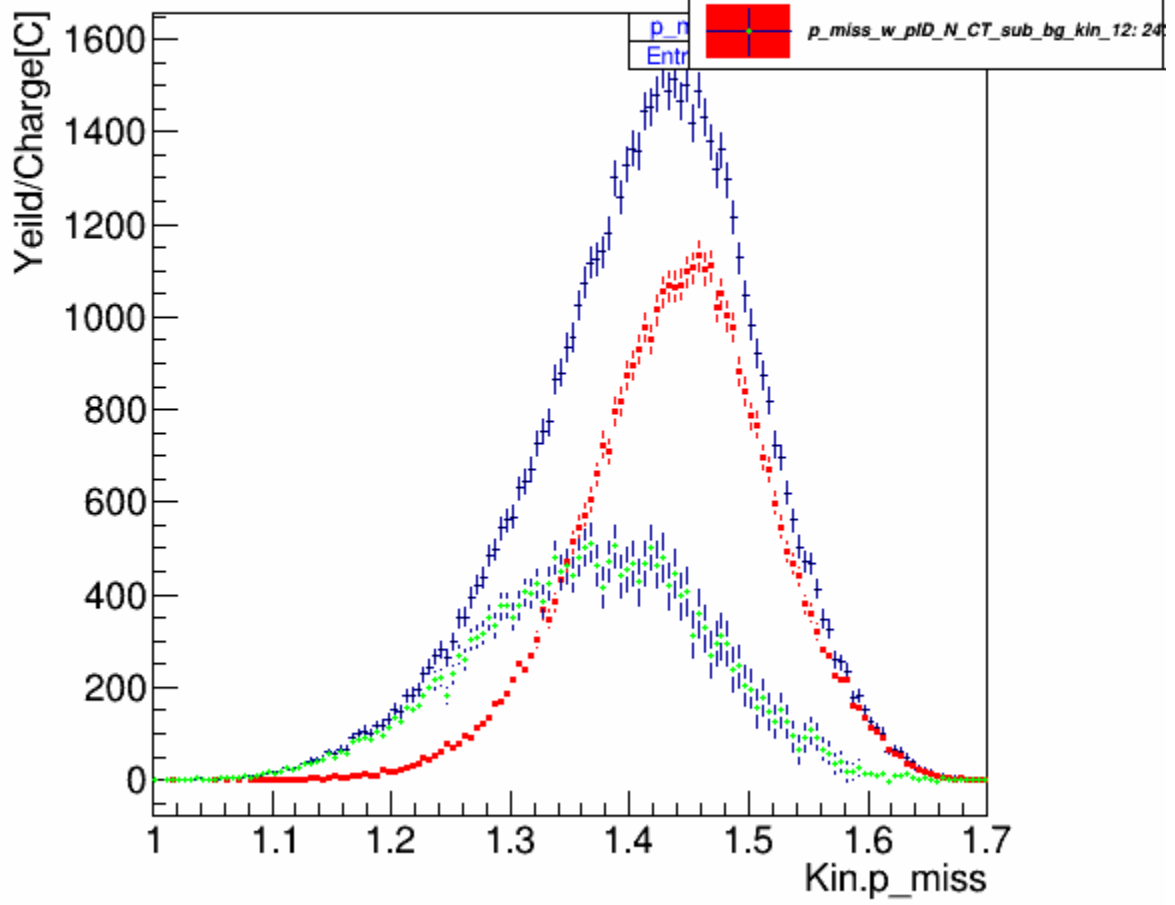
8.4 (bg) Energy transfer

mega_w_pID_N_CT_sub_bg_kin_12



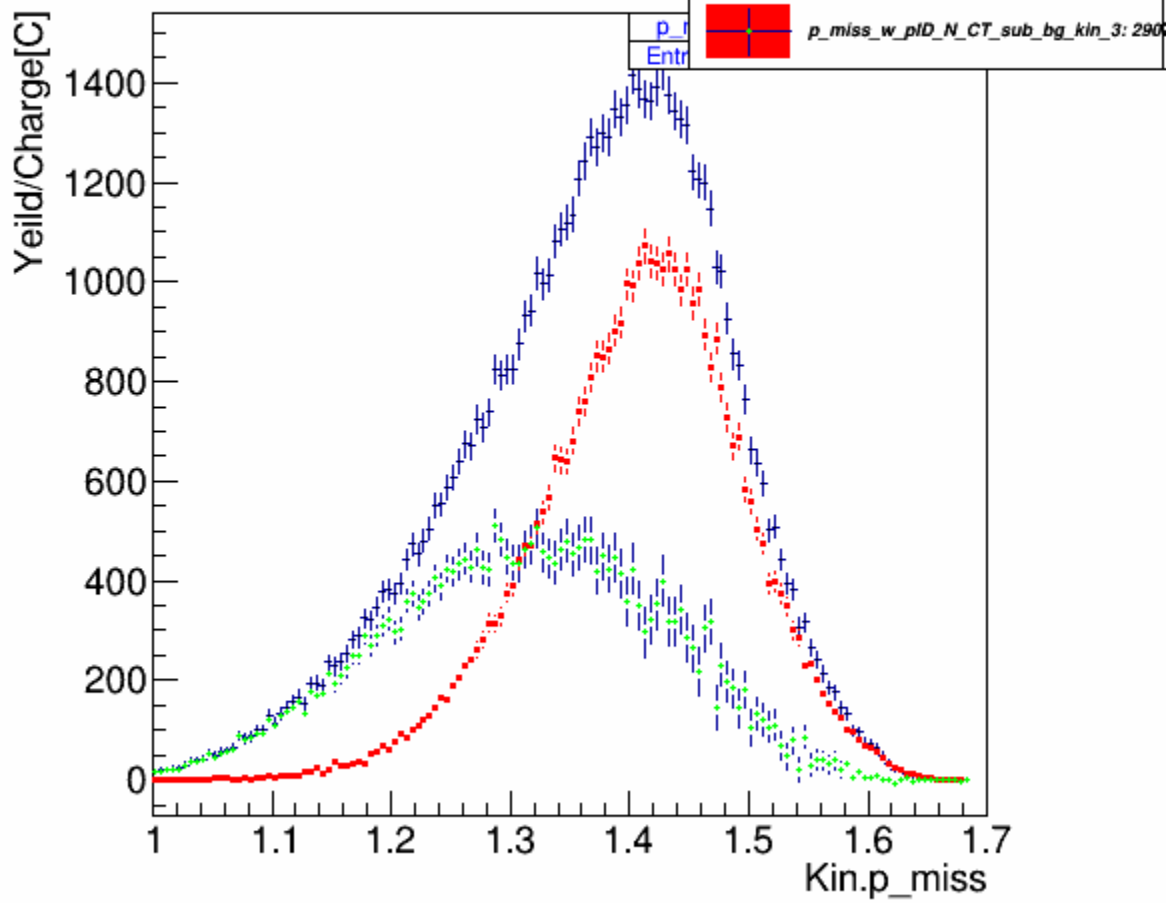
8.5 (peak sub bg) Omega

p_miss_w_pID_N_CT_kin_12



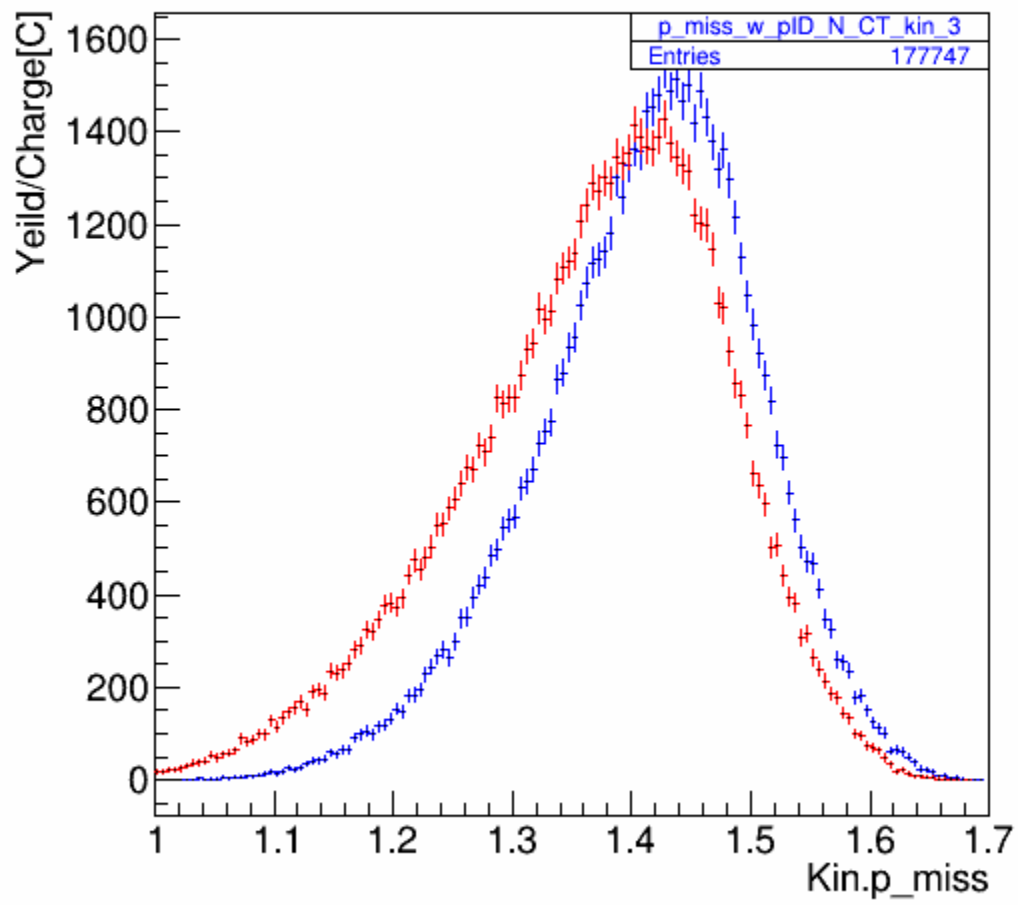
9.1 (kin12) p_miss

p_miss_w_pID_N_CT_kin_3



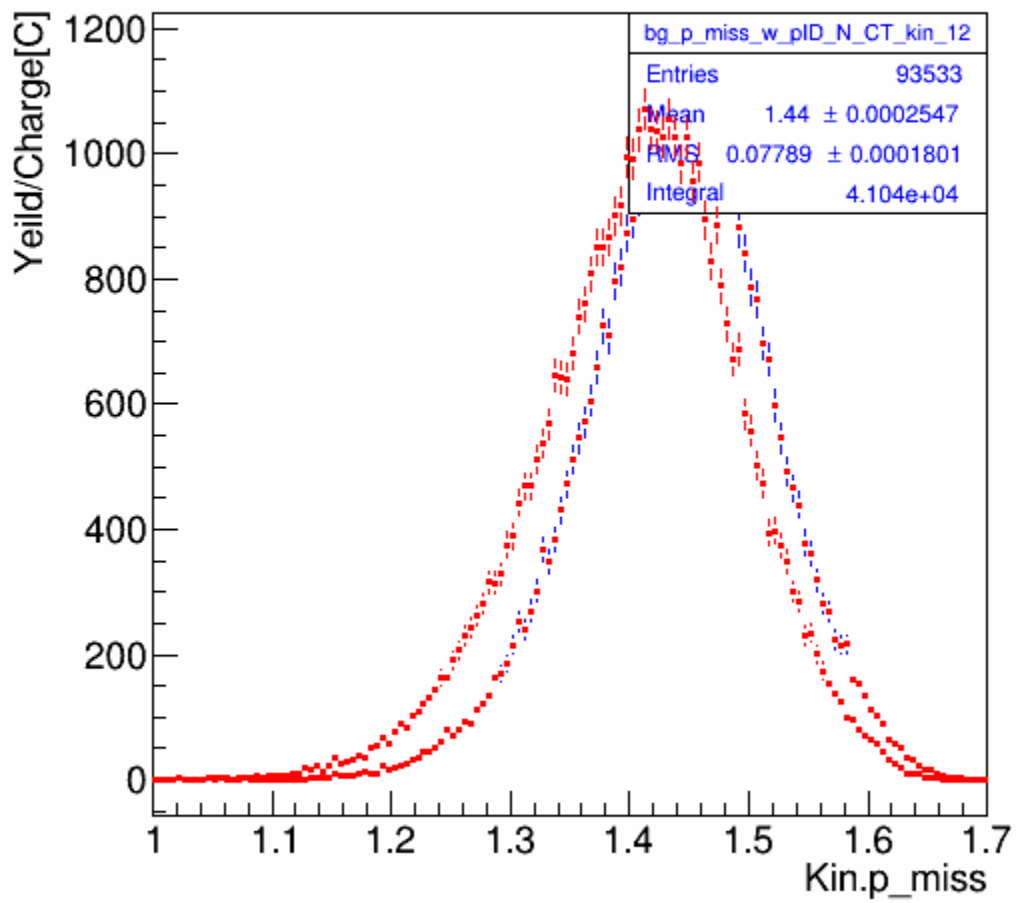
9.2 (kin3) p_miss

p_miss_w_pID_N_CT_kin_12



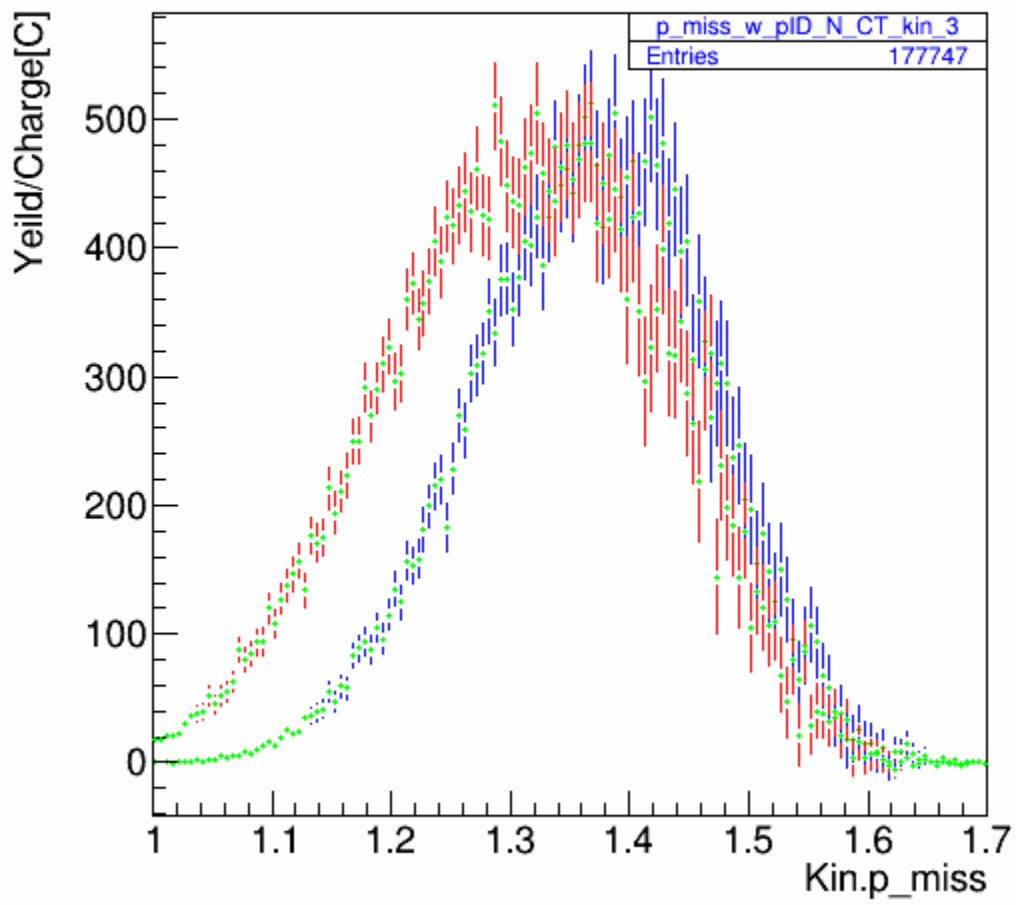
9.3 (peak) p_miss

bg_p_miss_w_pID_N_CT_kin_12



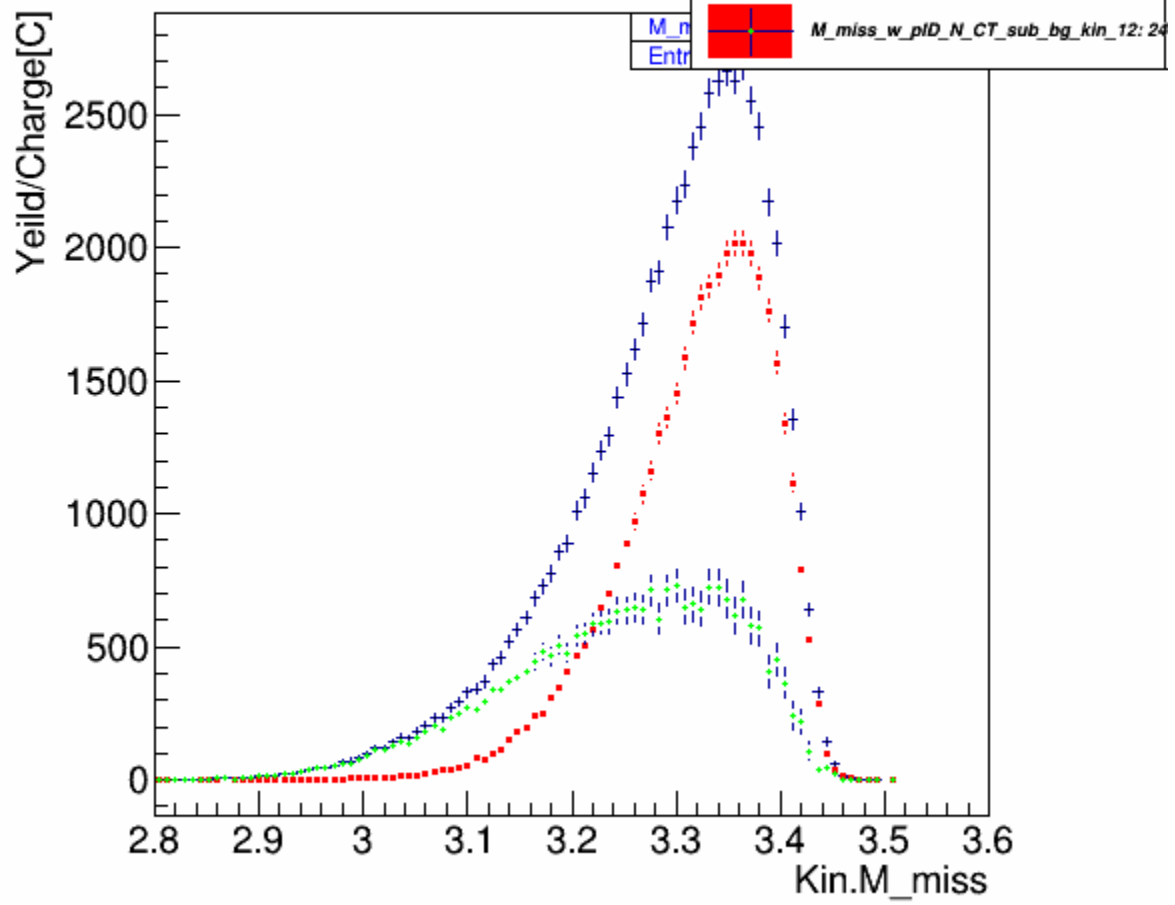
9.4 (bg) p_miss

miss_w_pID_N_CT_sub_bg_kin_12



9.5 (peak sub bg) p_miss

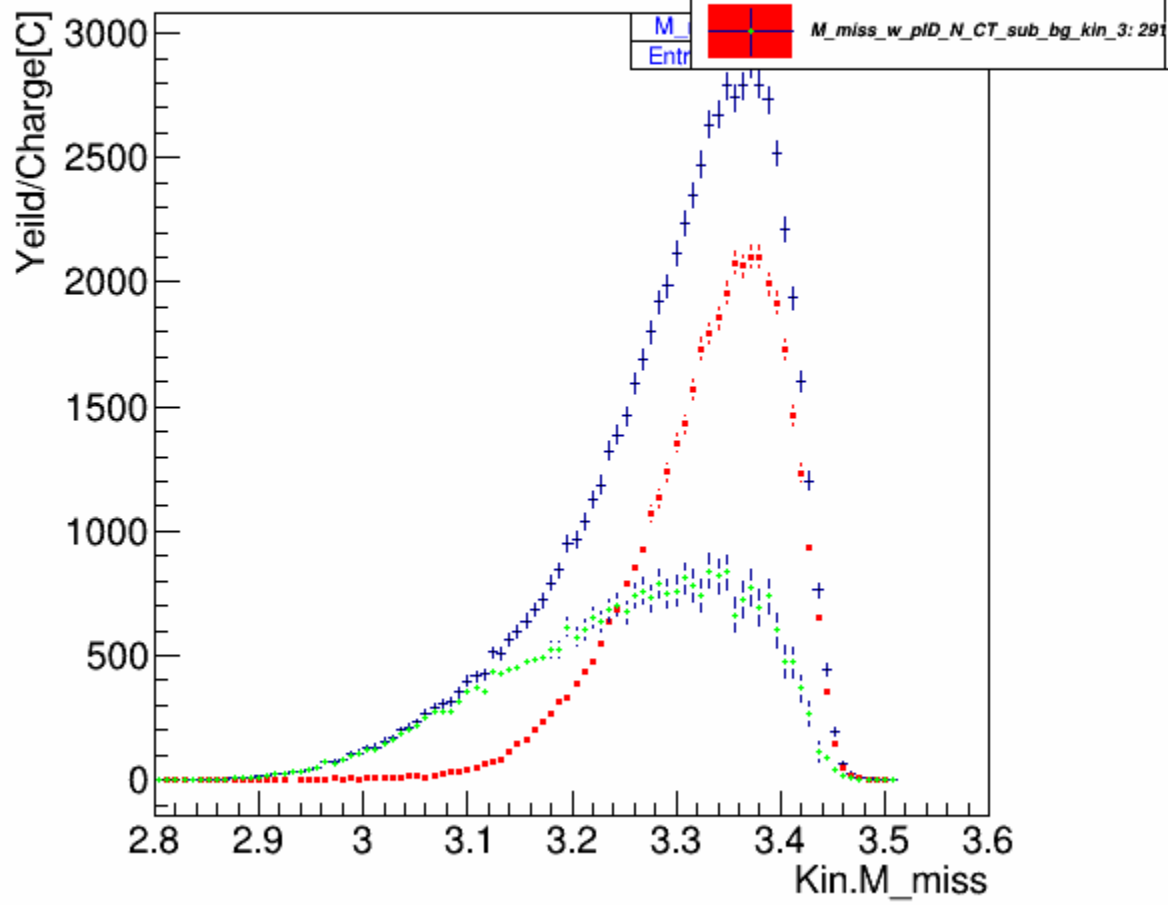
M_miss_w_pID_N_CT_kin_12



10.1 (kin12)

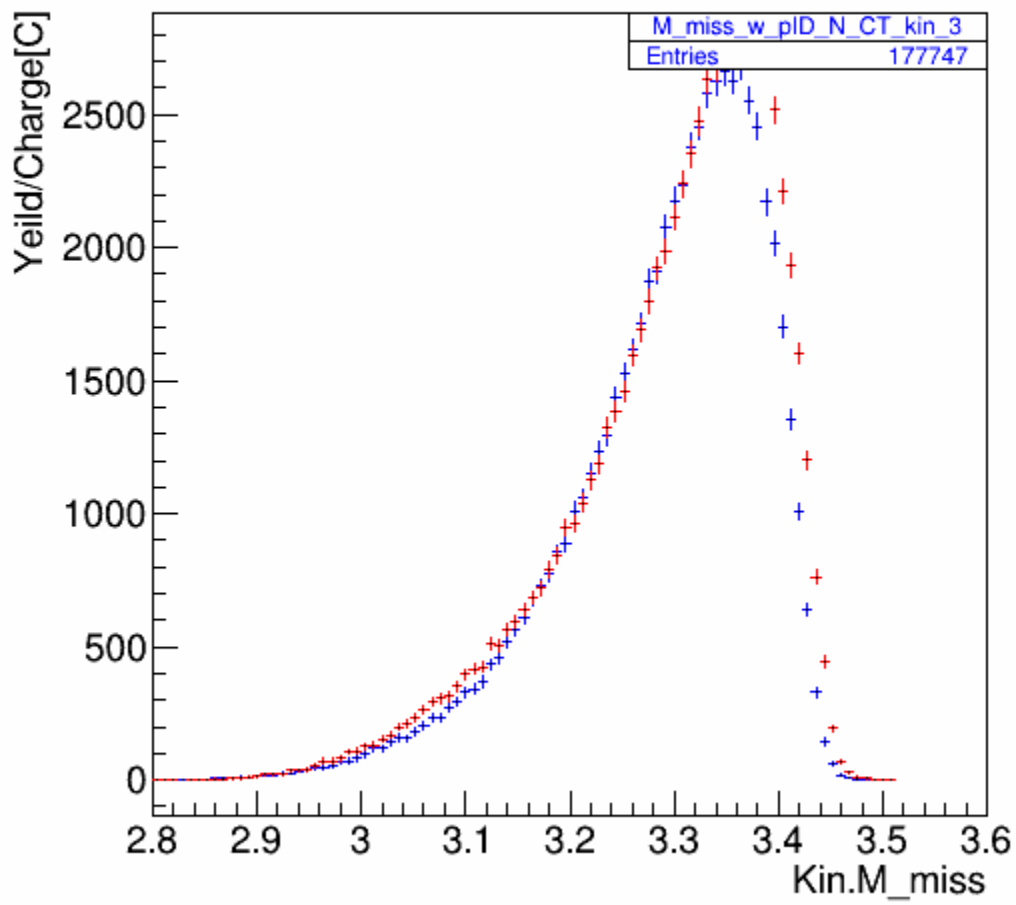
M_miss

M_miss_w_pID_N_CT_kin_3



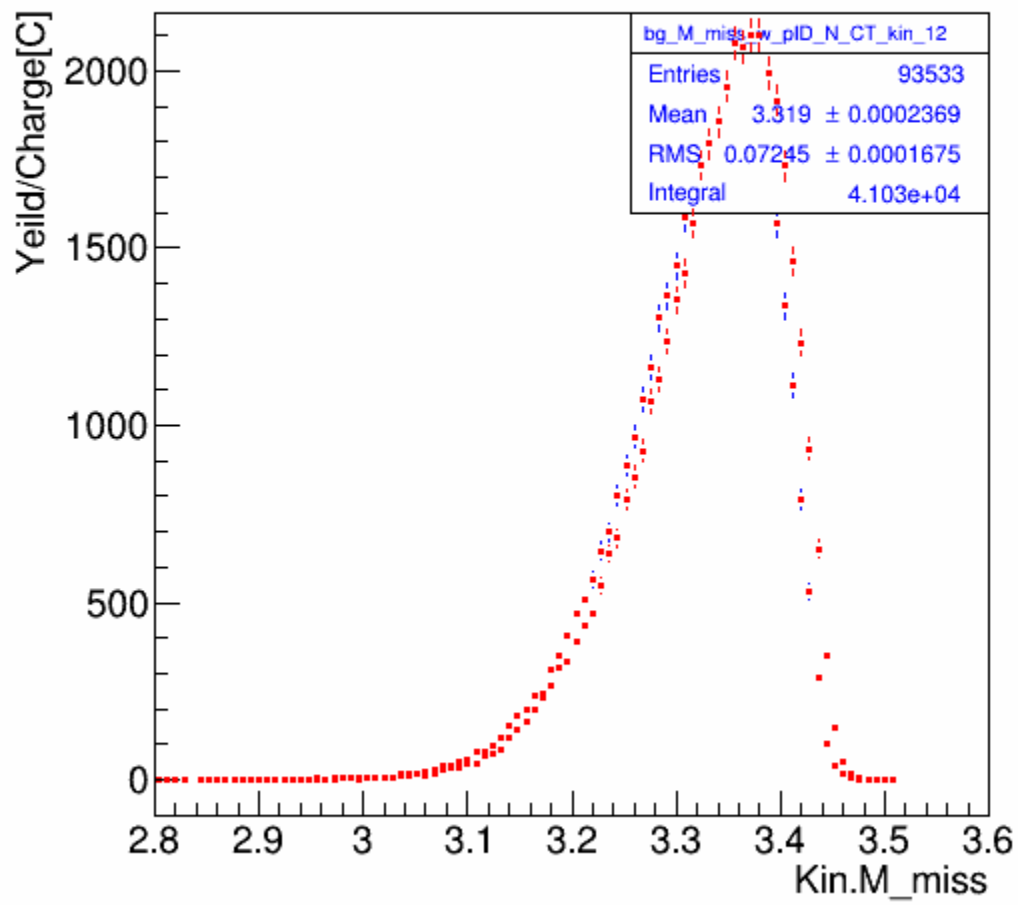
10.2 (kin3) M_miss

M_miss_w_pID_N_CT_kin_12



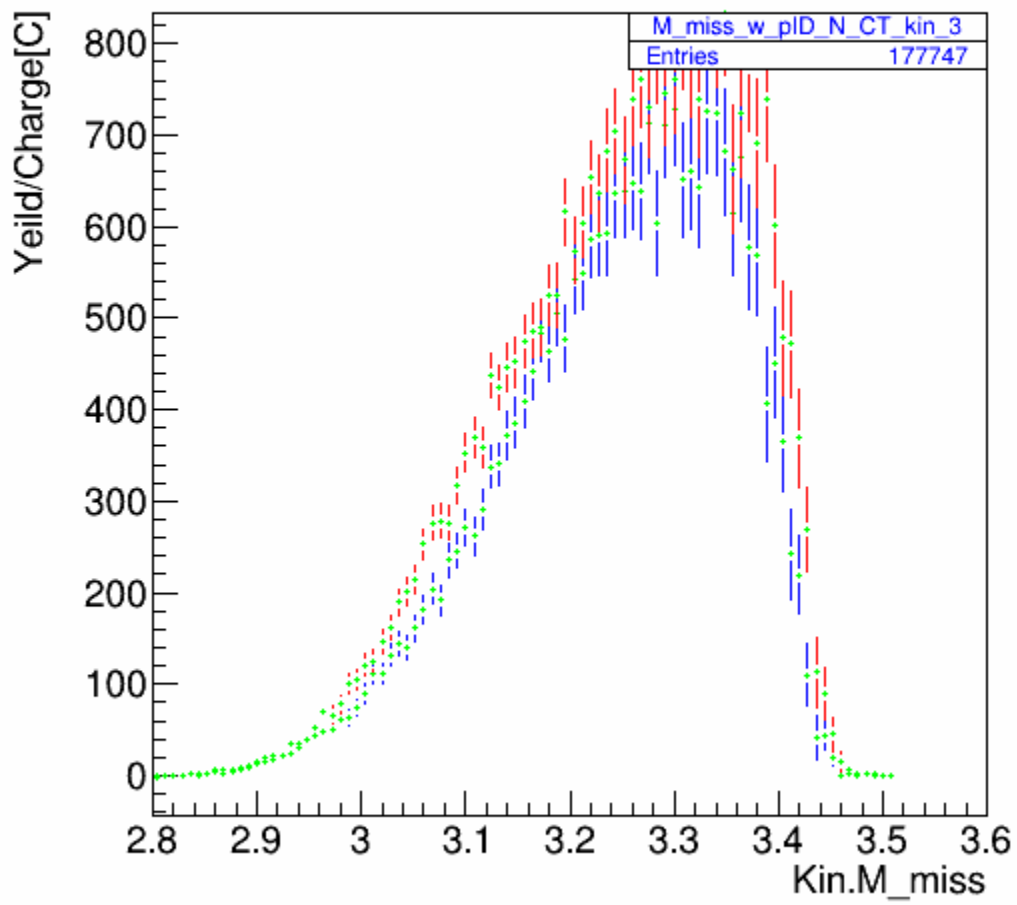
10.3 (peak) M_miss

bg_M_miss_w_pID_N_CT_kin_12



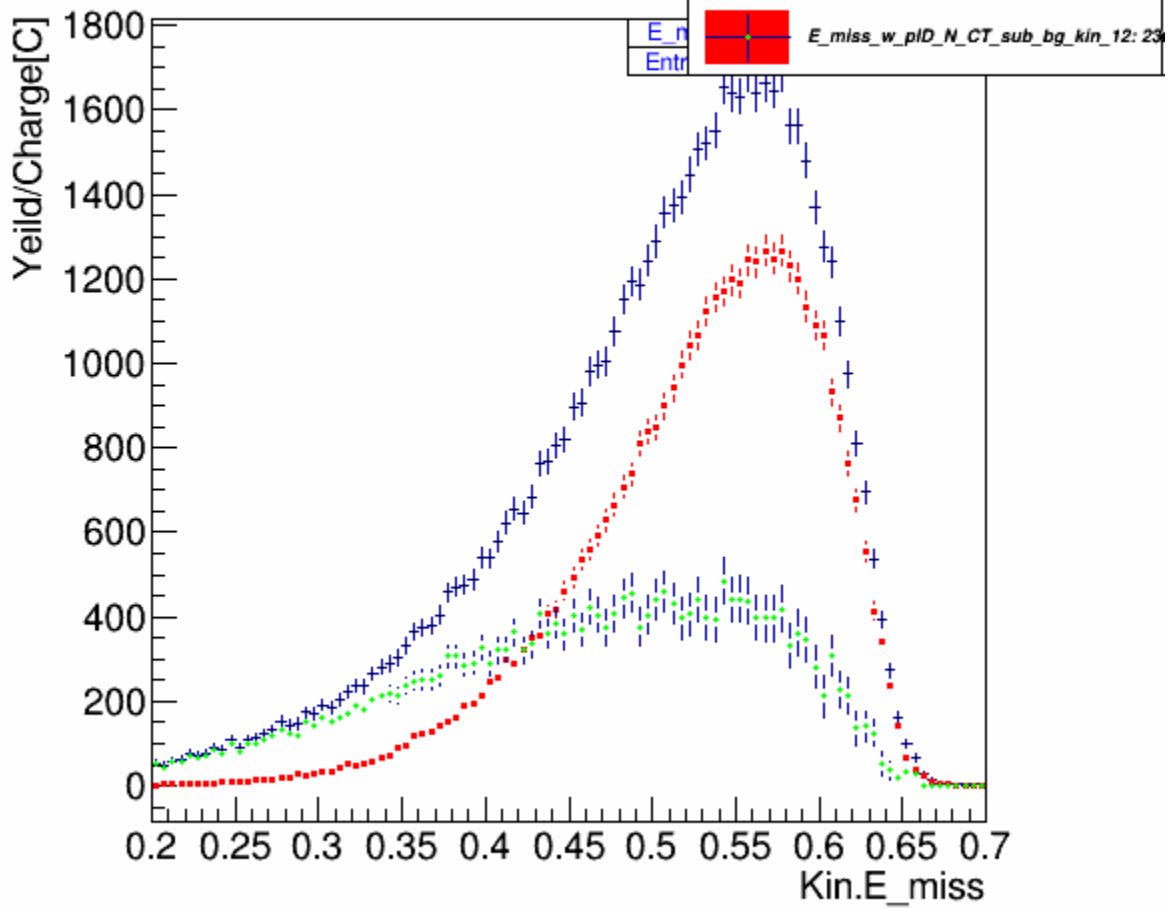
10.4 (bg) M_miss

#_miss_w_pID_N_CT_sub_bg_kin_12



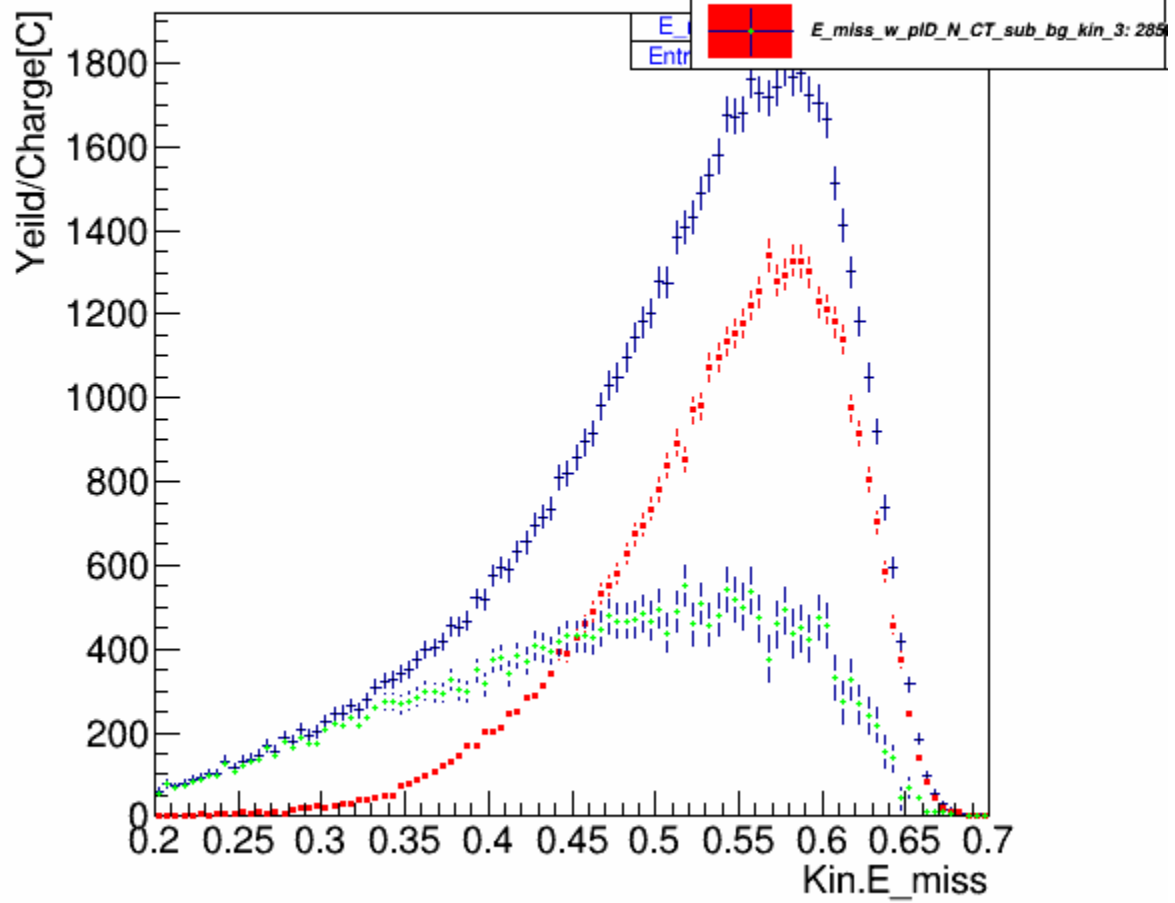
10.5 (peak sub bg) M_miss

E_miss_w_pID_N_CT_kin_12



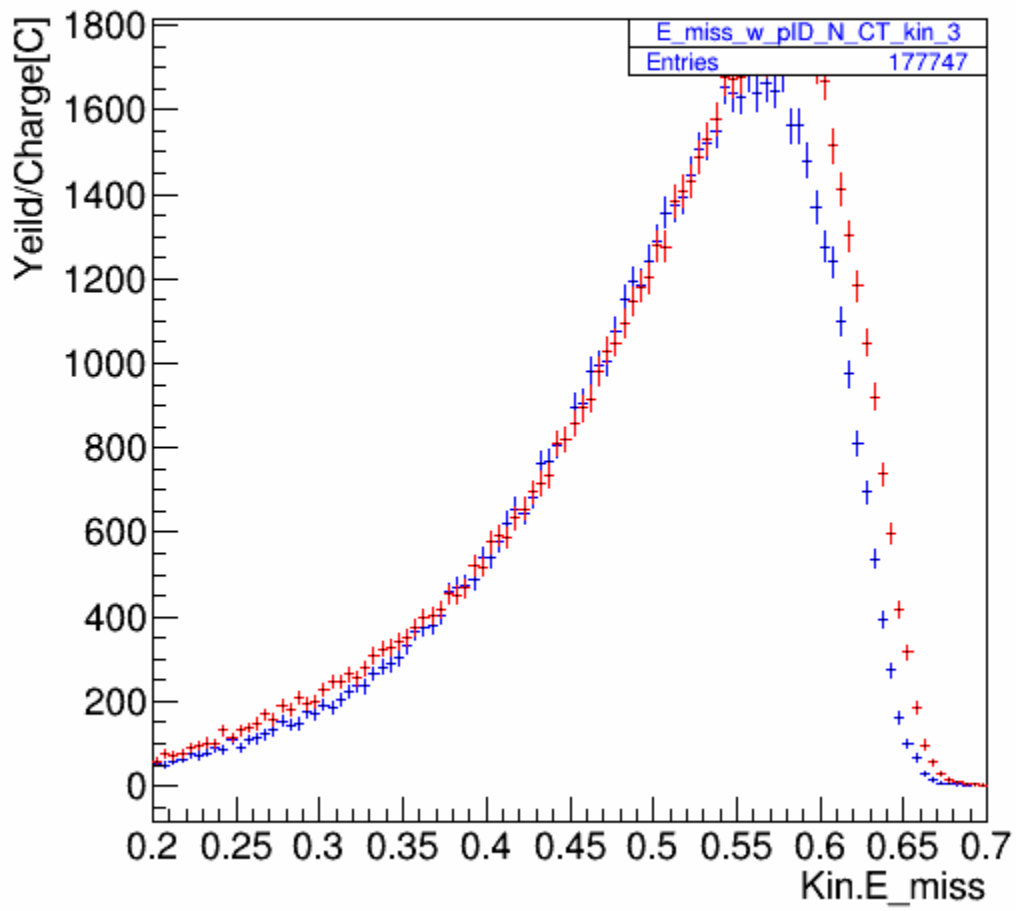
11.1 (kin12) E_miss

E_miss_w_pID_N_CT_kin_3



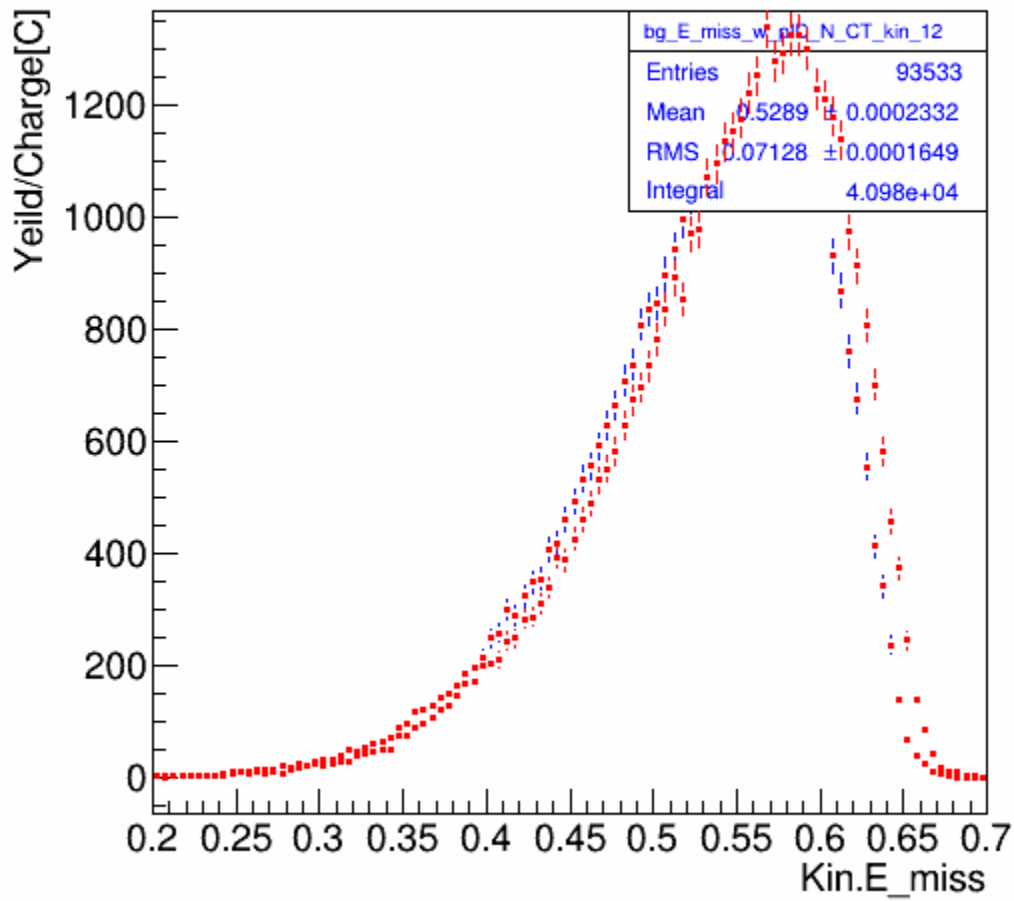
11.2 (kin3) E_miss

E_miss_w_pID_N_CT_kin_12



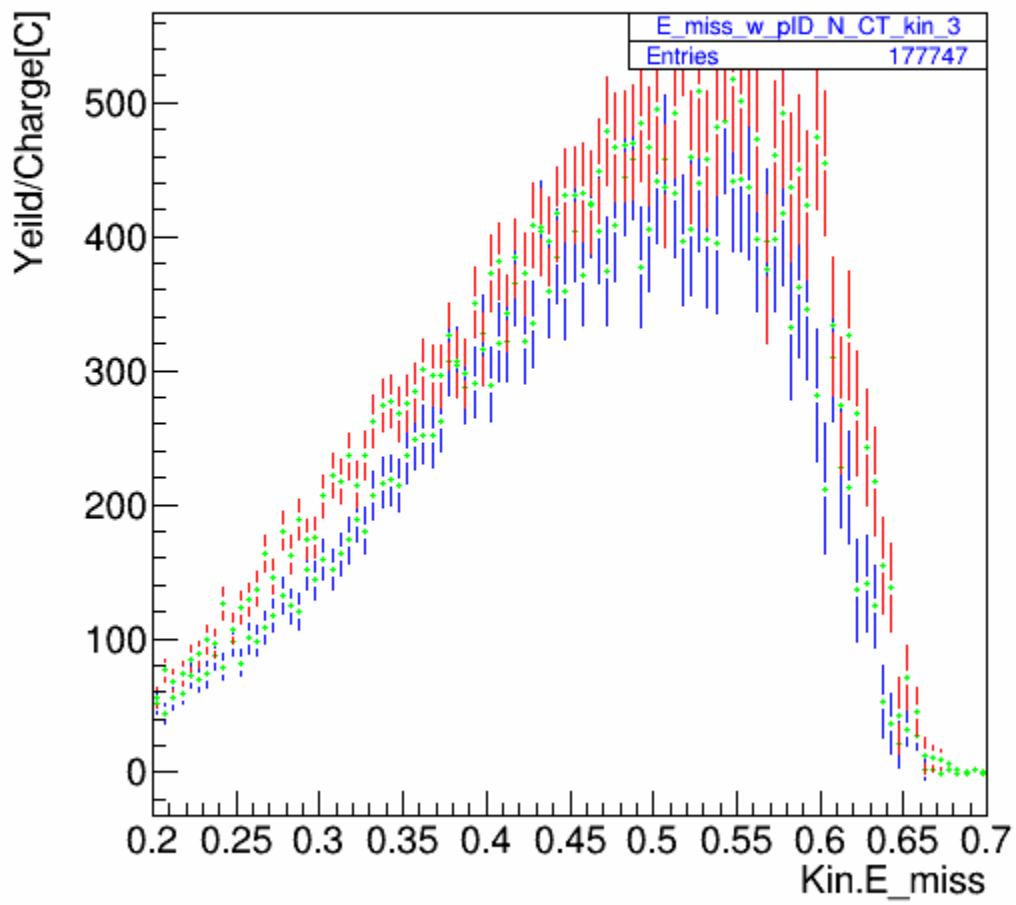
11.3 (peak) E_miss

bg_E_miss_w_pID_N_CT_kin_12



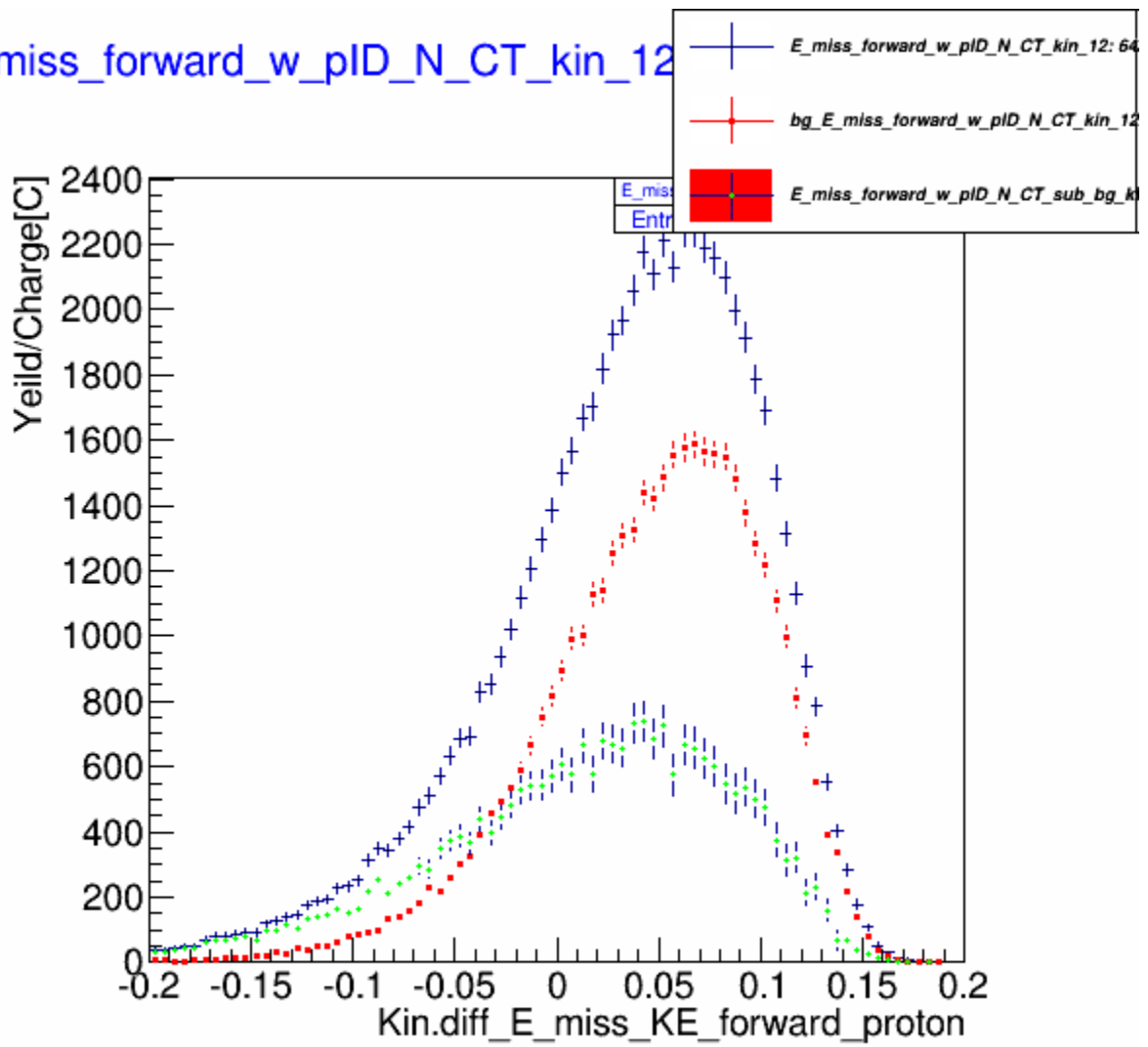
11.4 (bg) E_miss

_miss_w_pID_N_CT_sub_bg_kin_12



11.5 (peak sub bg) E_miss

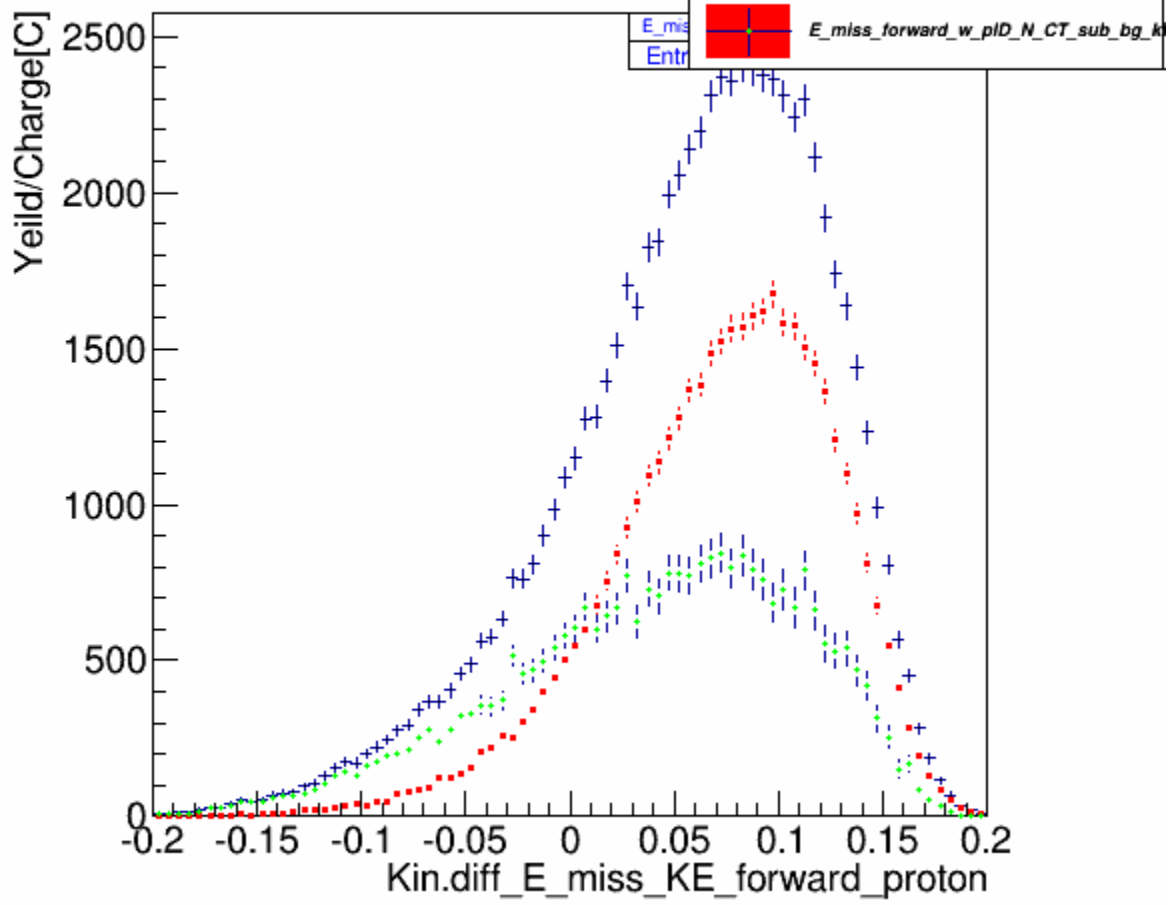
_miss_forward_w_pID_N_CT_kin_12



12.1 (kin12)

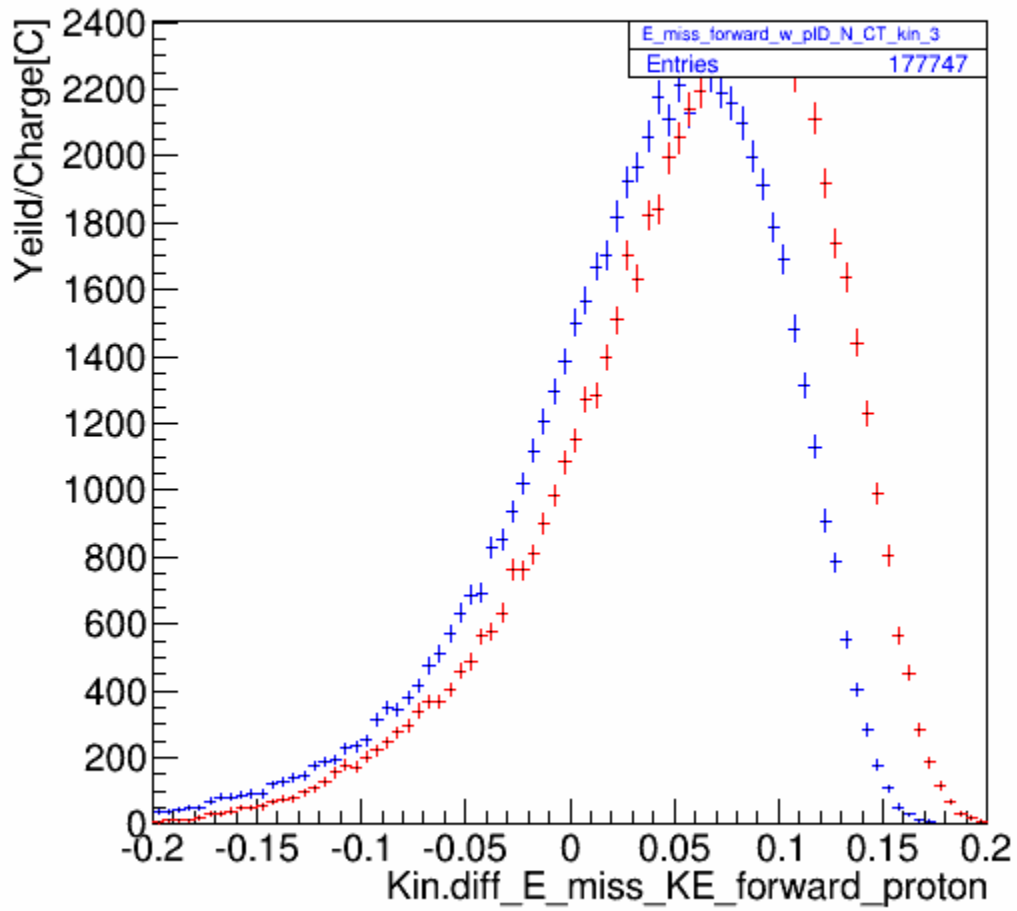
$E_miss_forward$

E_miss_forward_w_pID_N_CT_kin_3



12.2 (kin3) E_miss_forward

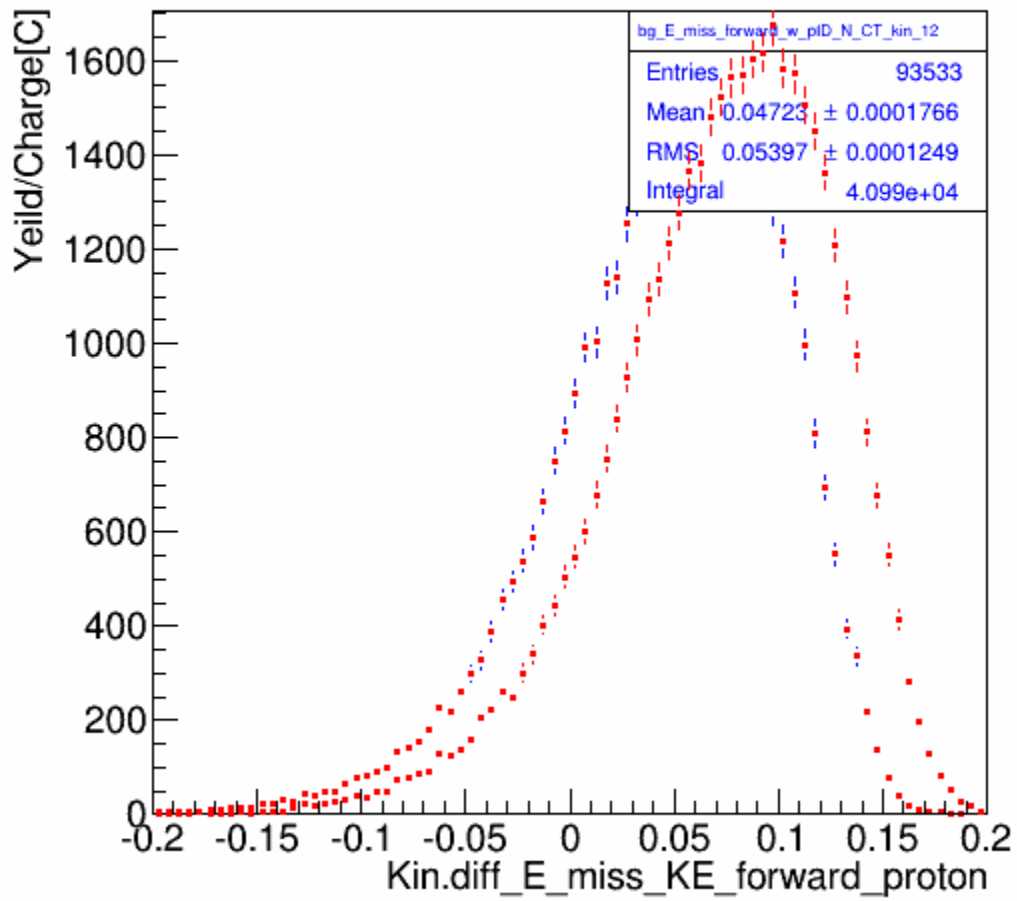
_miss_forward_w_pID_N_CT_kin_12



12.3 (peak)

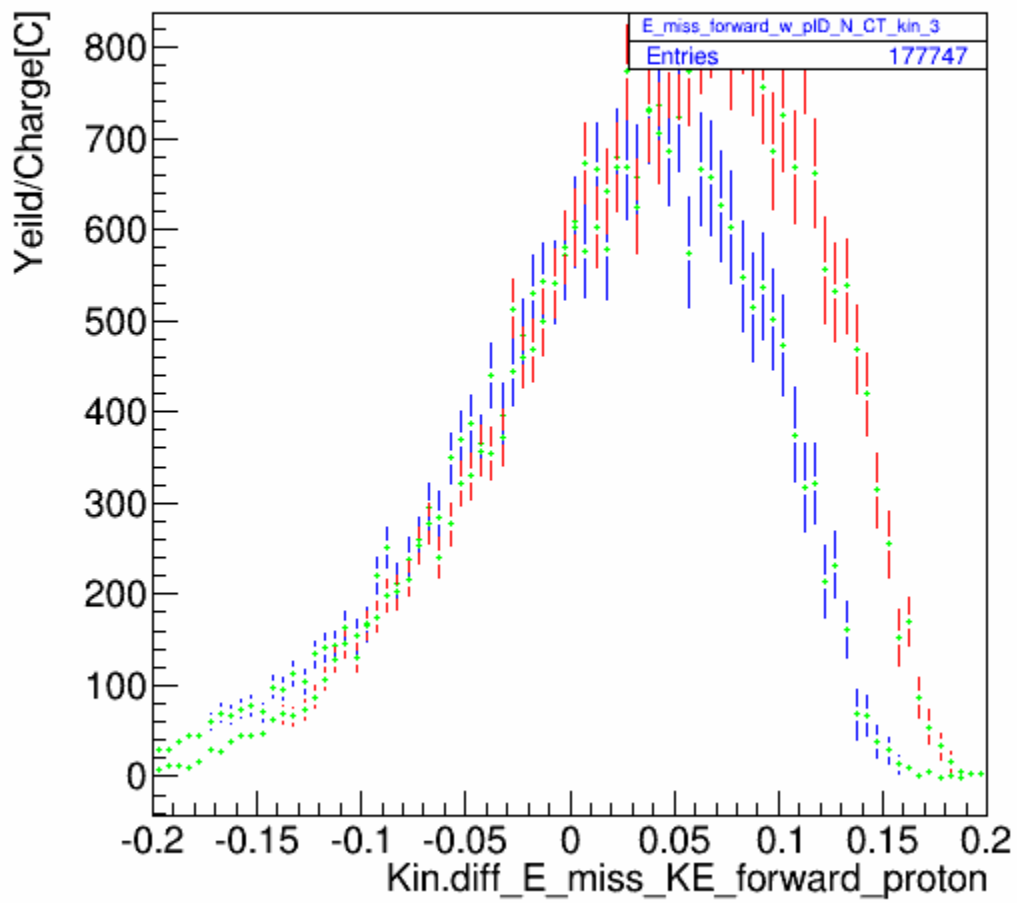
E_miss_forward

g_E_miss_forward_w_pID_N_CT_kin_12



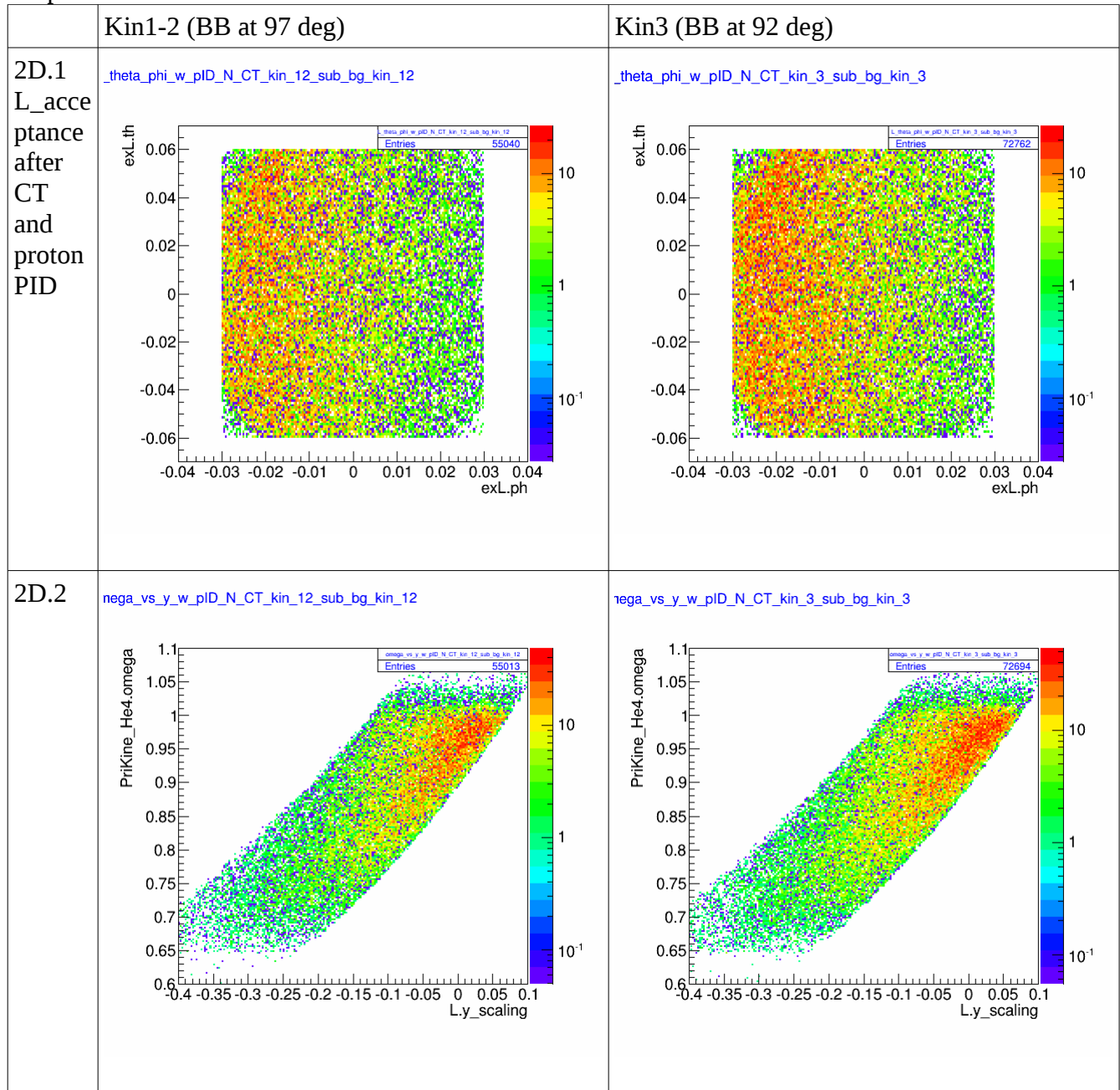
12.4 (bg) E_miss_forward

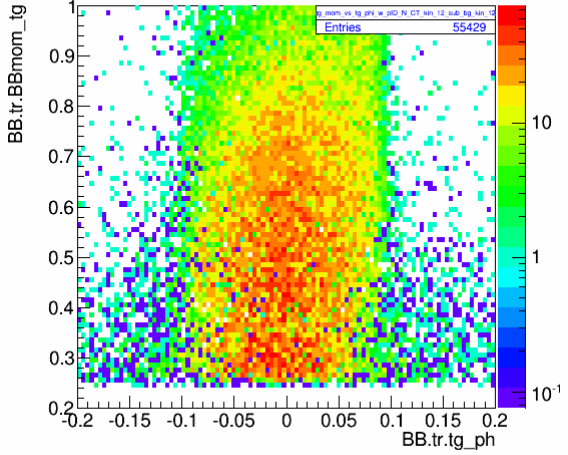
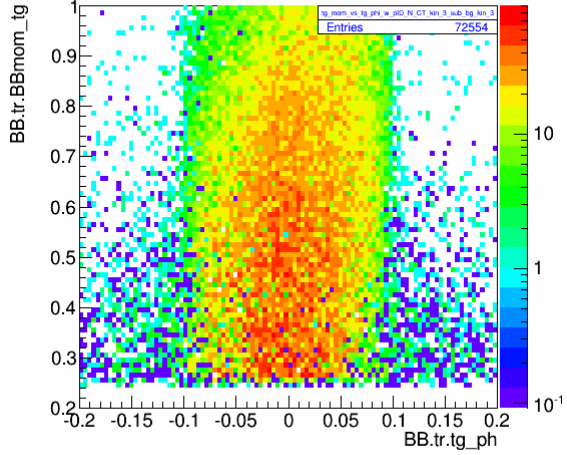
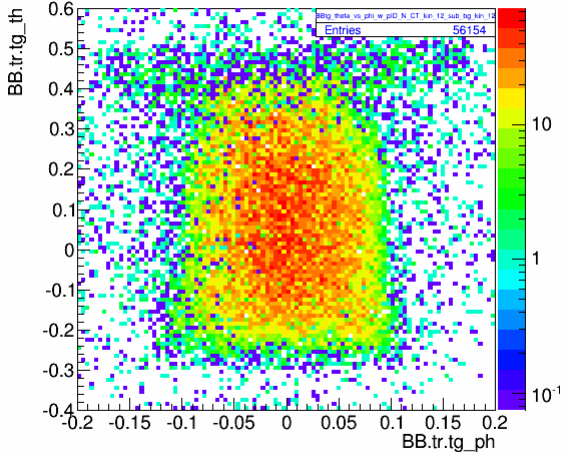
`_miss_forward_w_pID_N_CT_sub_bg_kin_12`



12.5 (peak sub bg) E_miss with forward proton

2D plots



	Kin1-2 (BB at 97 deg)	Kin3 (BB at 92 deg)
2D.3	<p data-bbox="261 300 638 321">_mom_vs_tg_phi_w_pID_N_CT_kin_12_sub_bg_kin_12</p> 	<p data-bbox="867 300 1224 321">_mom_vs_tg_phi_w_pID_N_CT_kin_3_sub_bg_kin_3</p> 
2D.4	<p data-bbox="261 919 638 940">3tg_theta_vs_phi_w_pID_N_CT_kin_12_sub_bg_kin_12</p> 	<p data-bbox="867 919 1224 940">3tg_theta_vs_phi_w_pID_N_CT_kin_3_sub_bg_kin_3</p> 