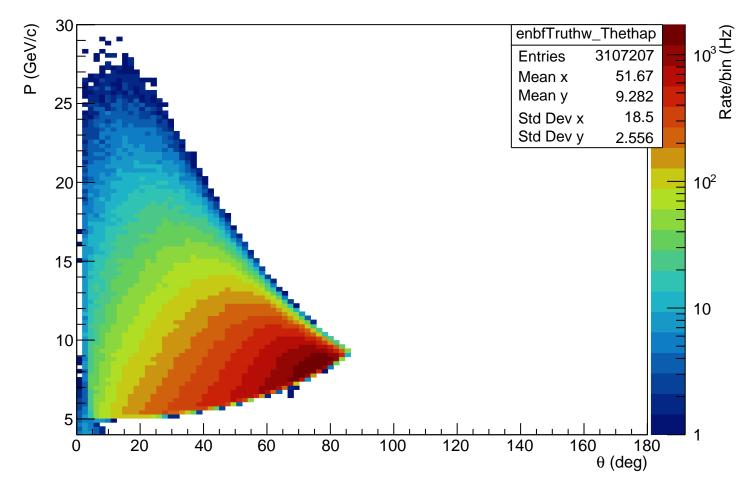
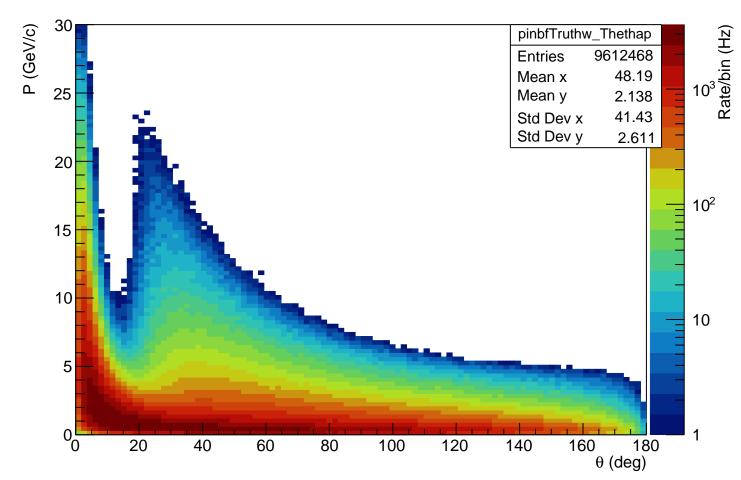
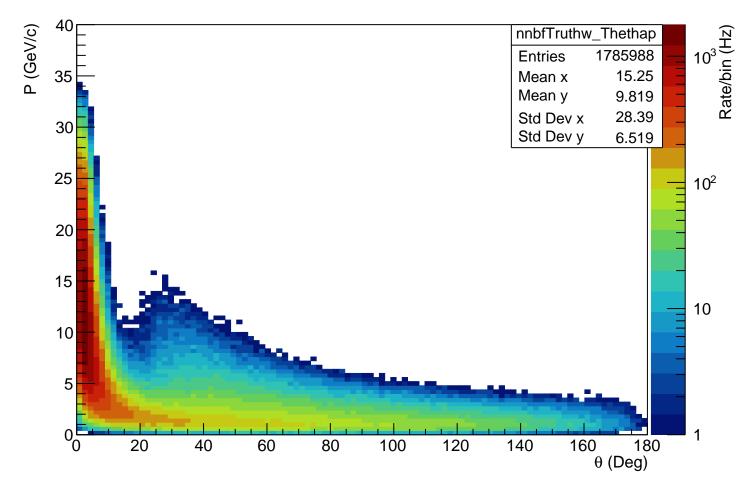
#### e' truth no beam effects $\theta$ vs P



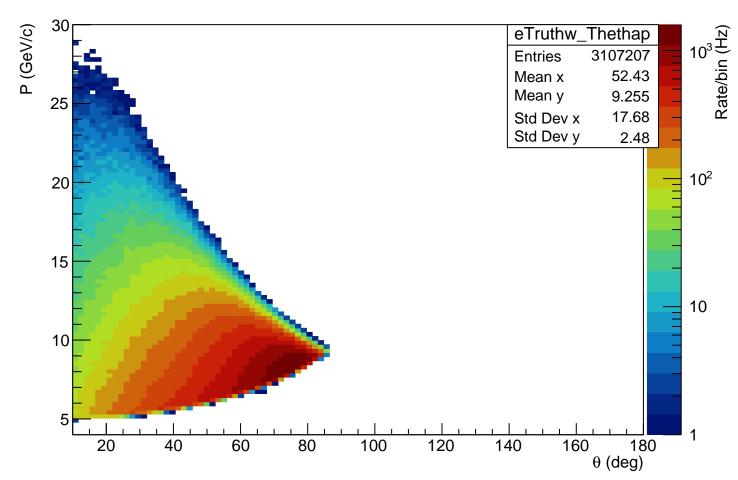
#### $\pi^+$ truth no beam effects $\theta$ vs P



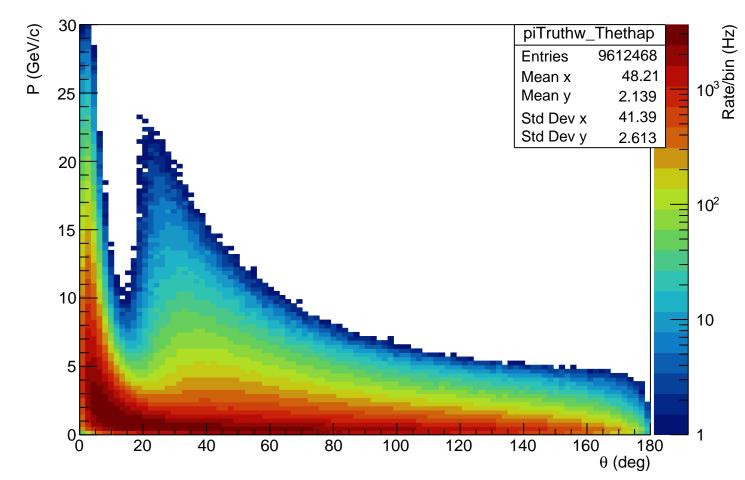
#### n truth no beam effects $\theta$ vs P



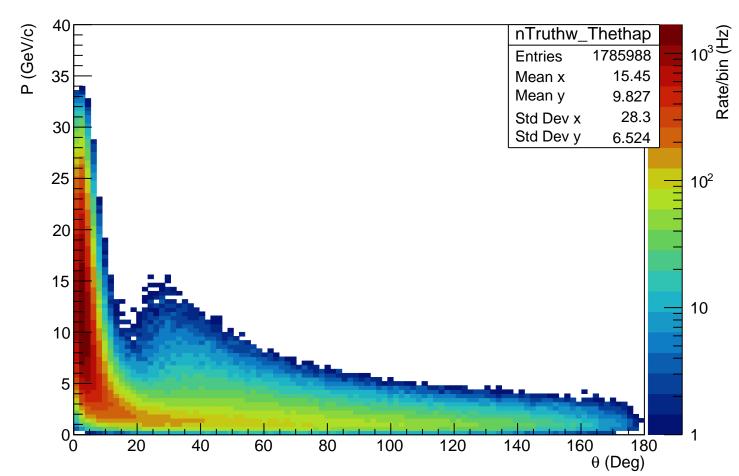
e' truth  $\theta$  vs P



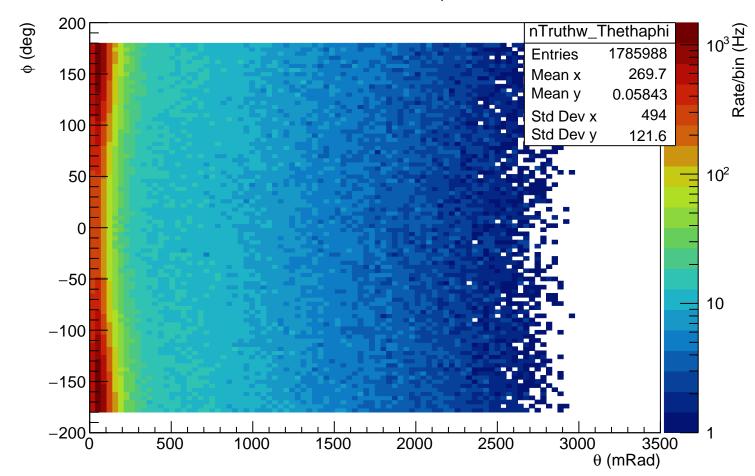
 $\pi^+$  truth  $\theta$  vs P



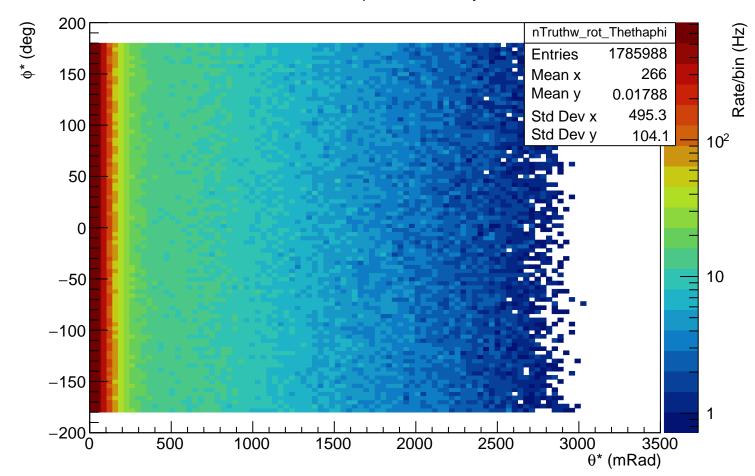
n truth  $\theta$  vs P



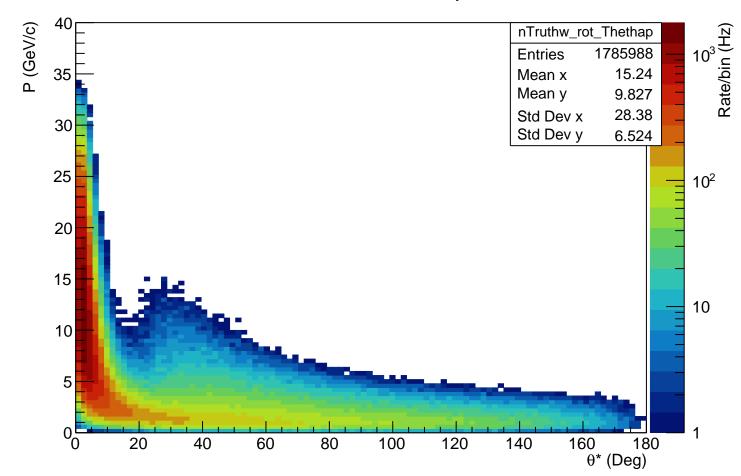
n truth  $\theta$  vs  $\phi$ 



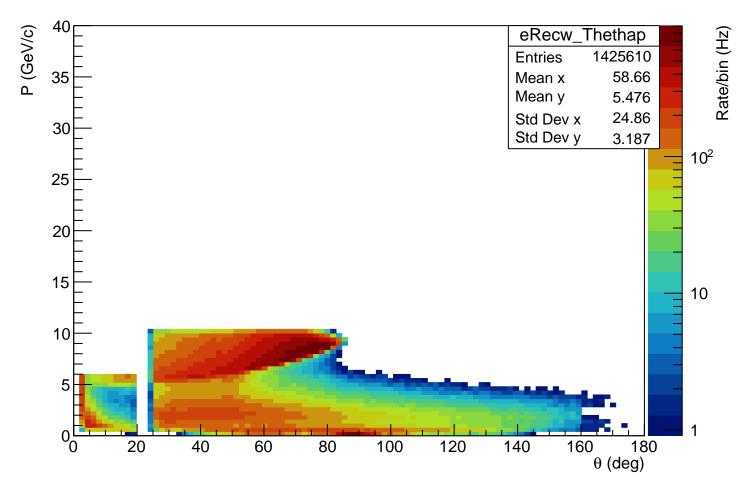
# n truth $\theta^*$ vs $\phi^*$ around p axis



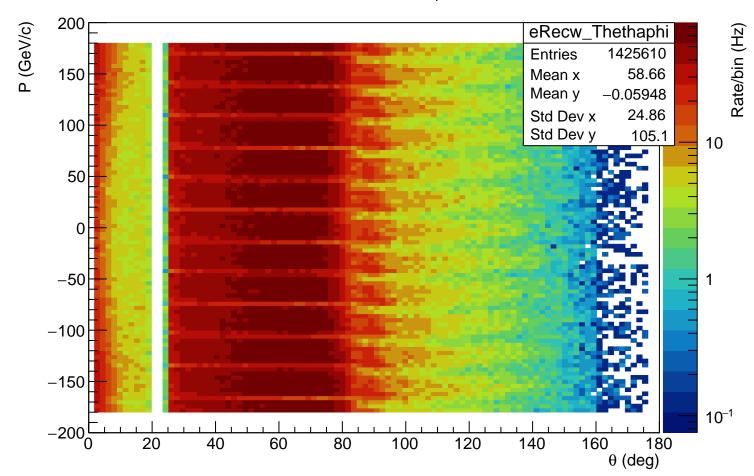
### n truth $\theta^*$ vs P around p axis



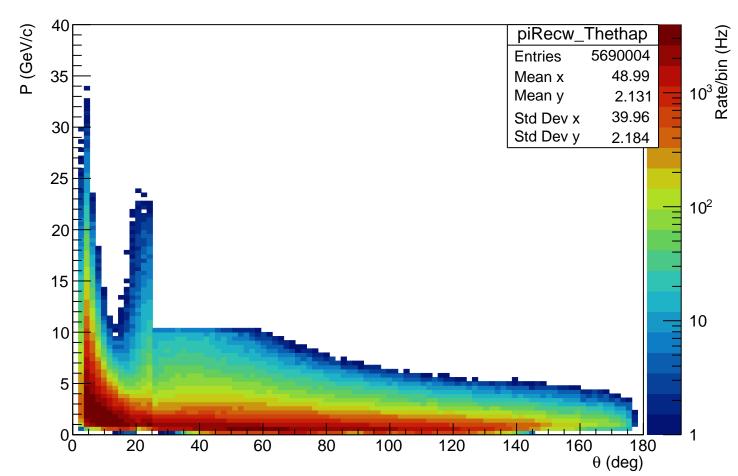
e' rec  $\theta$  vs P



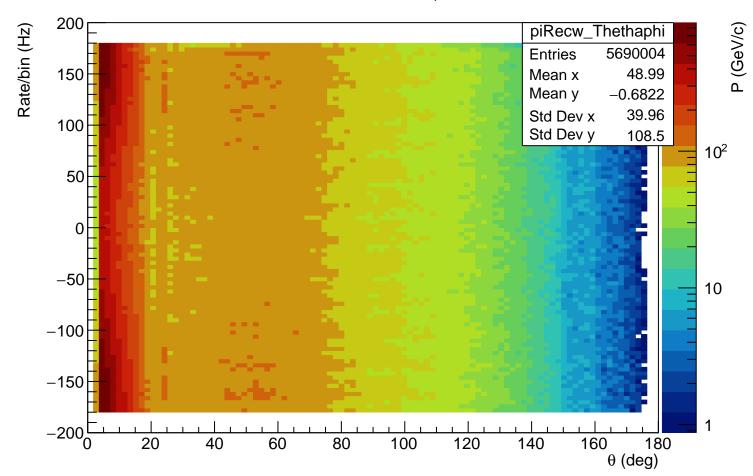
 $e' rec \theta vs \phi$ 



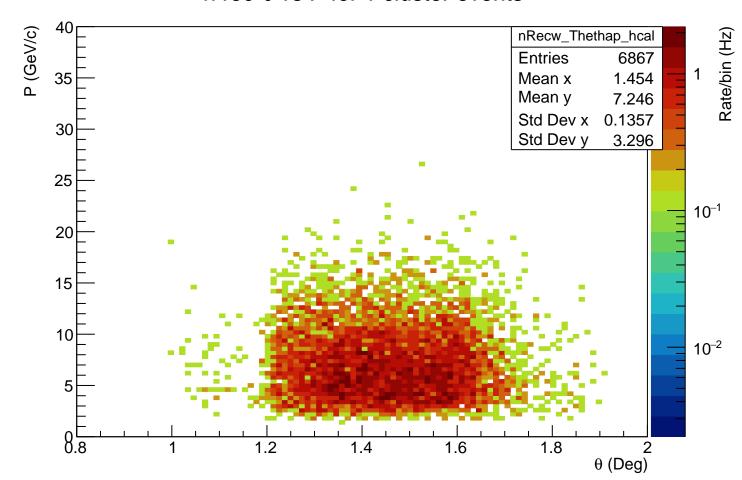
 $\pi^+$  rec  $\theta$  vs P

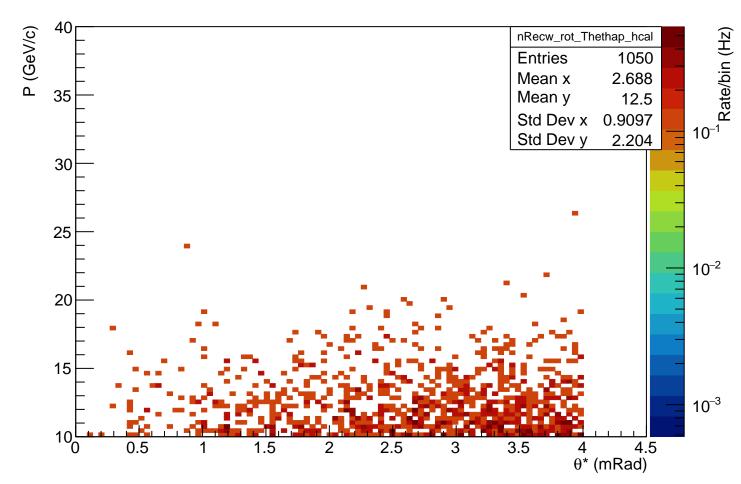


 $\pi^+$  rec  $\theta$  vs  $\phi$ 

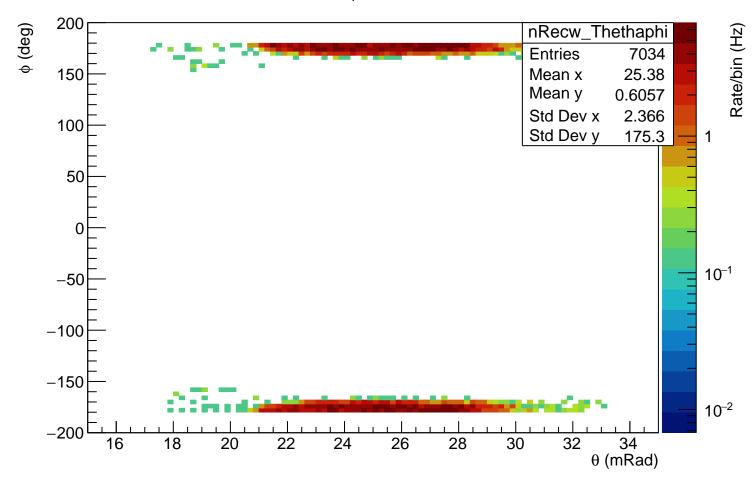


#### n rec $\theta$ vs P for 1 cluster events

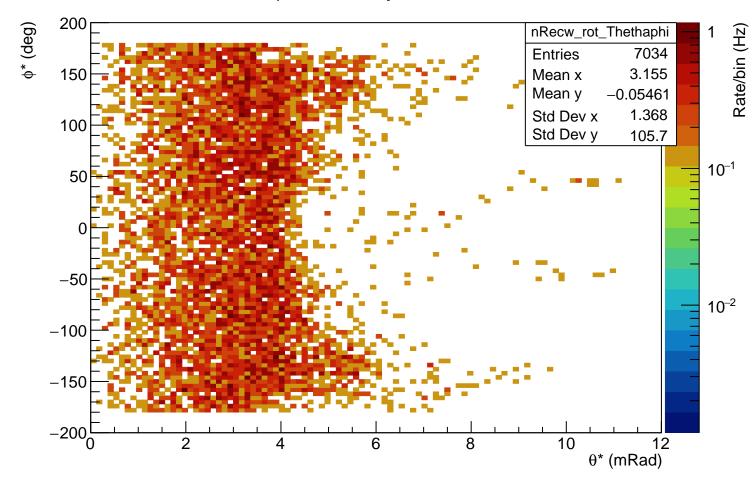




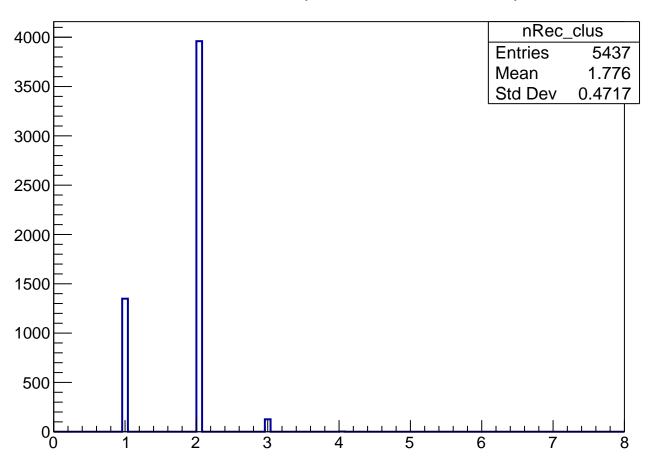
## n rec $\theta$ vs $\phi$ for all clusters



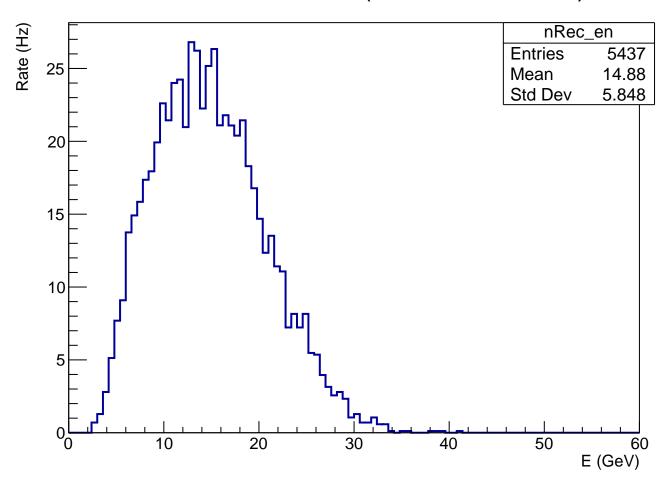
# n rec $\theta^*$ vs $\phi^*$ around p axis for all clusters



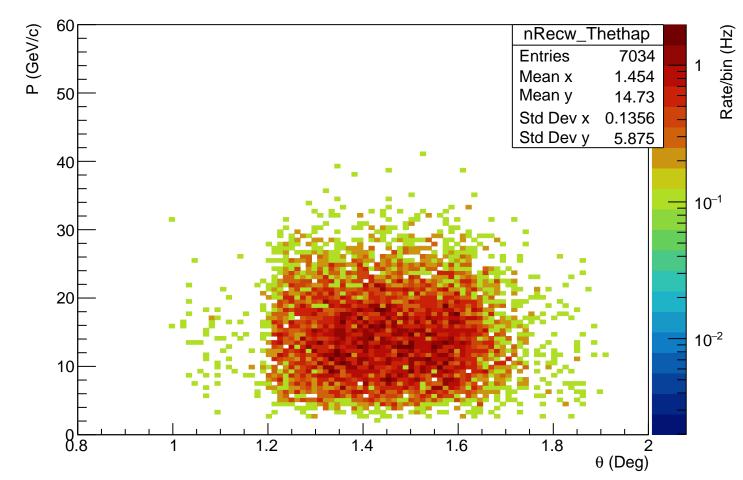
## n all clusters ( rec $\theta^*$ < 4.0 mRad )



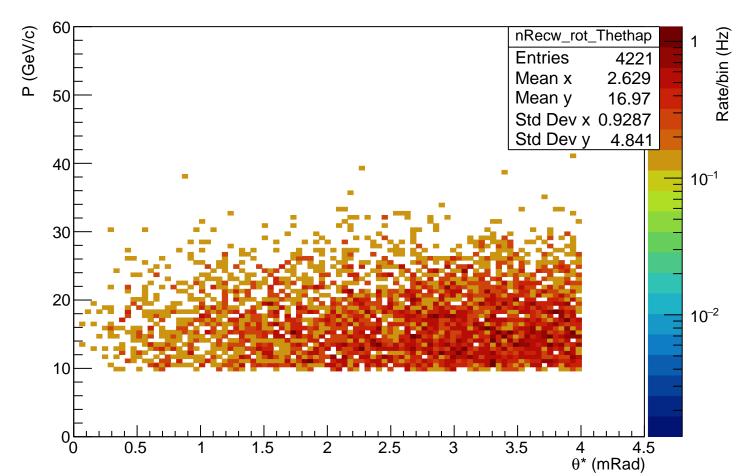
## n rec E for all clusters ( rec $\theta^*$ < 4.0 mRad )

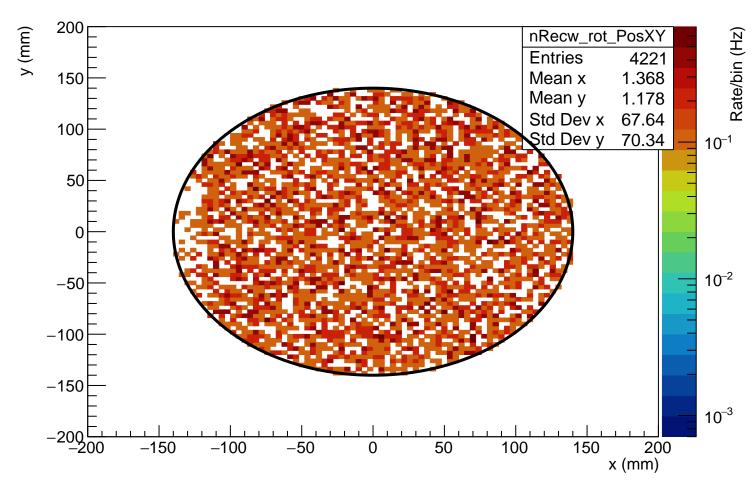


#### n rec $\theta$ vs P for all clusters

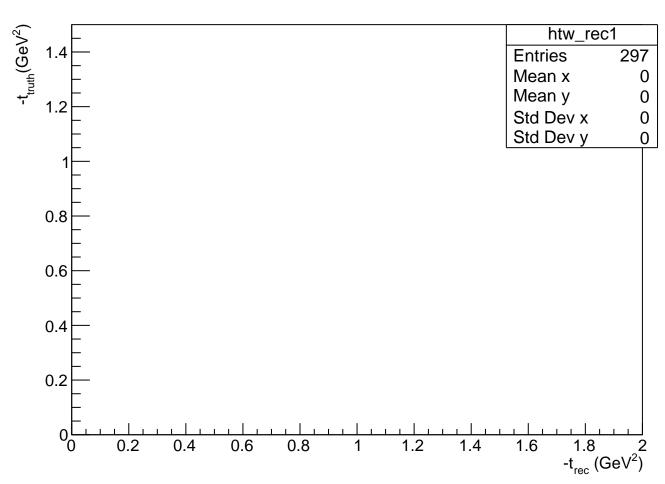


n rec  $\theta^*$  vs P around p axis for all clusters ( rec  $\theta^*$  < 4.0 mRad, E > 10 GeV )

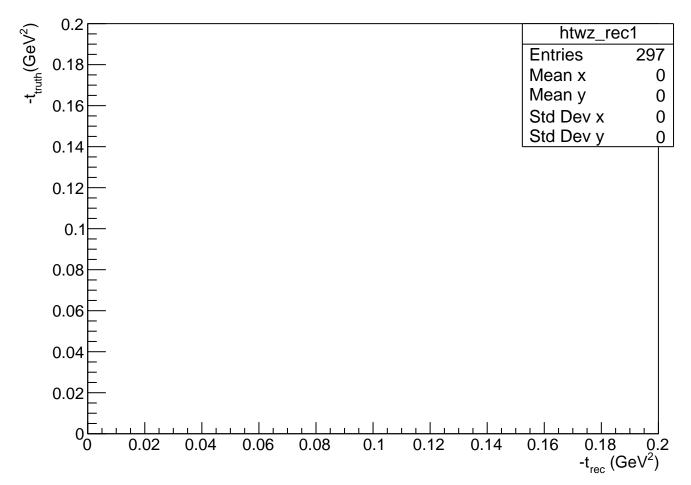




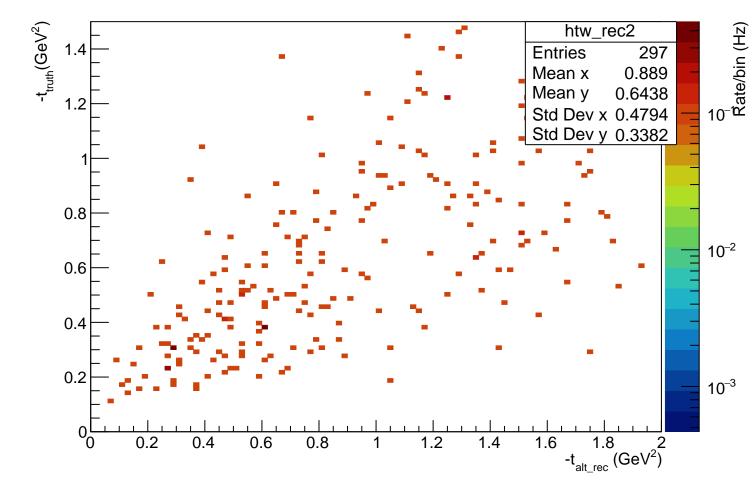
#### -t rec vs -t truth Distribution



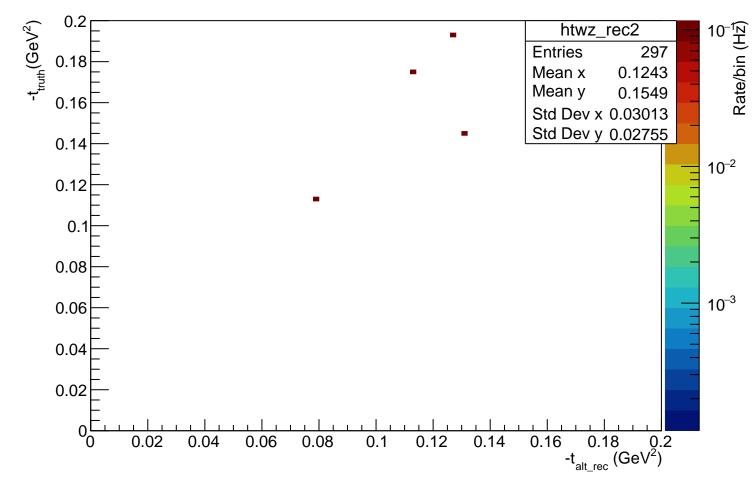
#### -t rec vs -t truth Distribution



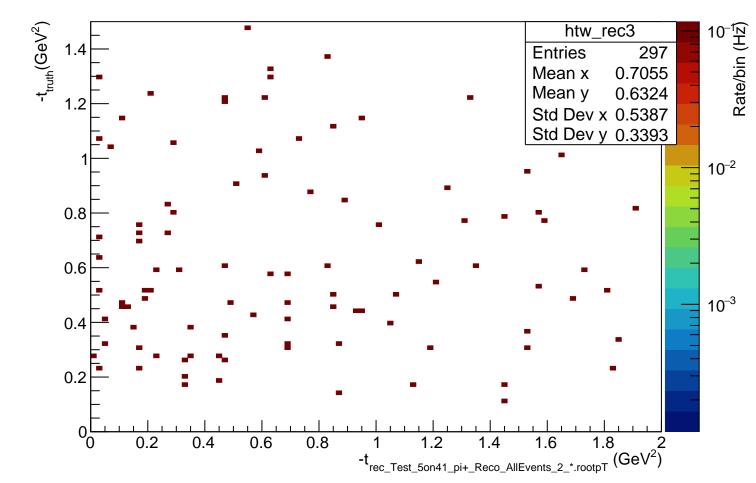
## -t alt\_rec vs -t truth Distribution



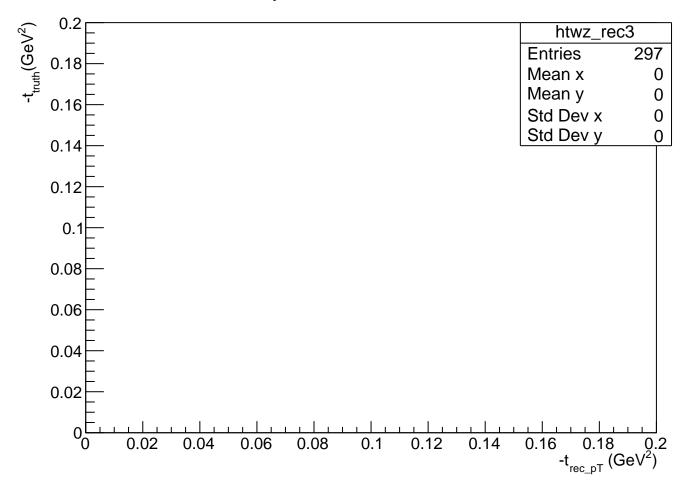
## -t alt\_rec vs -t truth Distribution



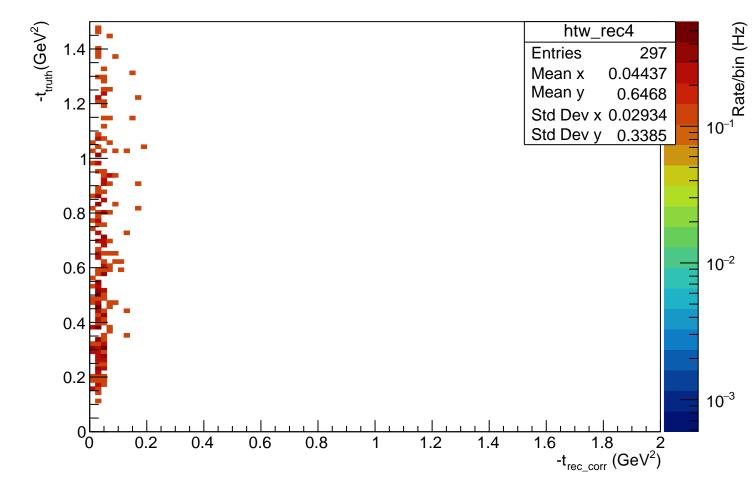
# -t rec\_pT vs -t truth Distribution



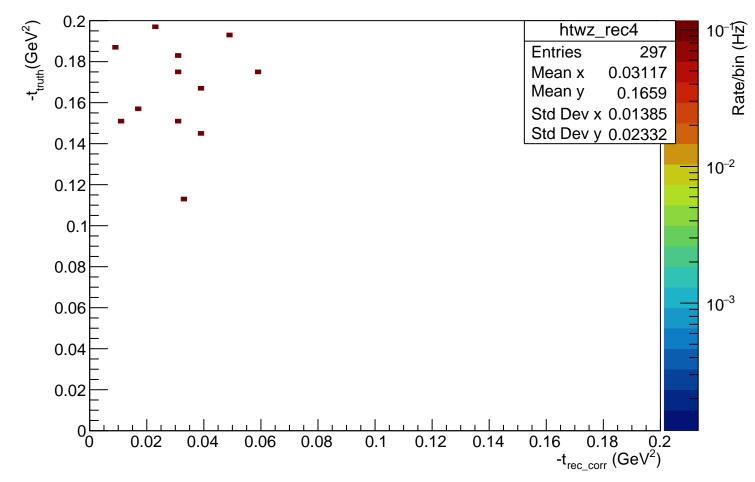
## -t rec\_pT vs -t truth Distribution



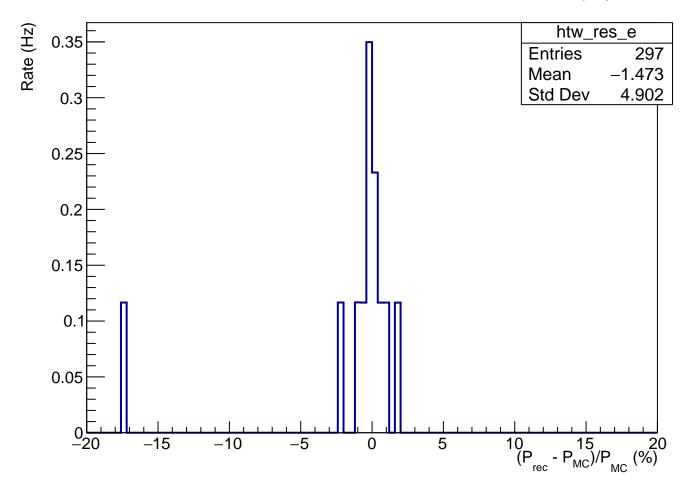
#### -t rec\_corr vs -t truth Distribution



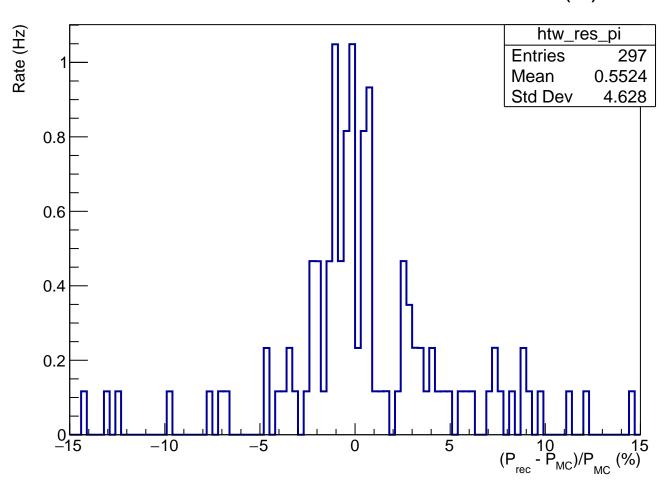
#### -t rec\_corr vs -t truth Distribution



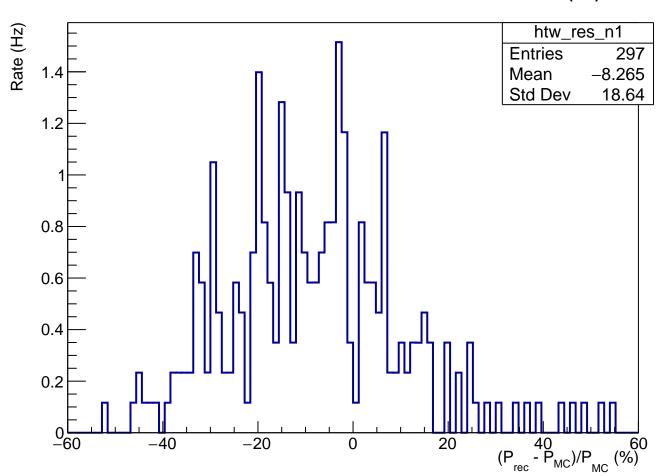
### e' Track Momentum Resolution Distribution (%)



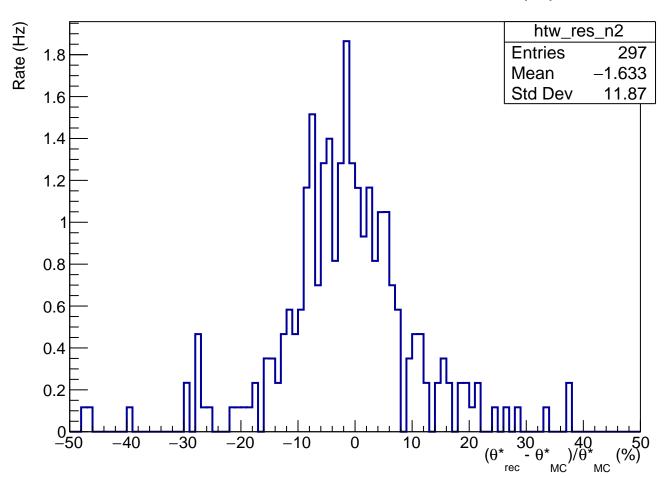
#### $\pi^+$ Track Momentum Resolution Distribution (%)



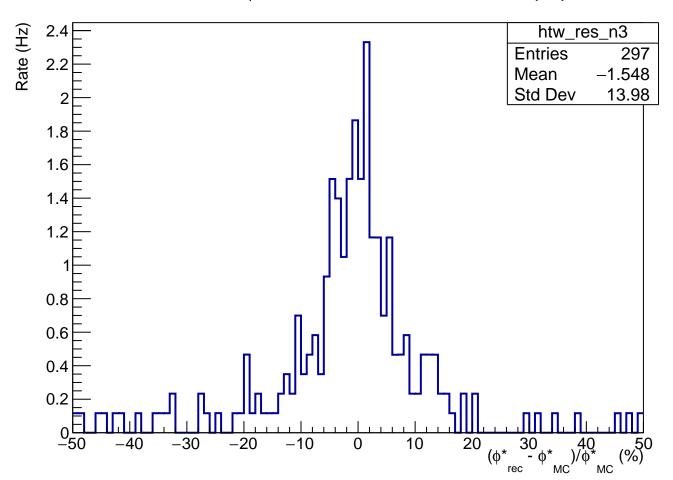
### n Track Momentum Resolution Distribution (%)



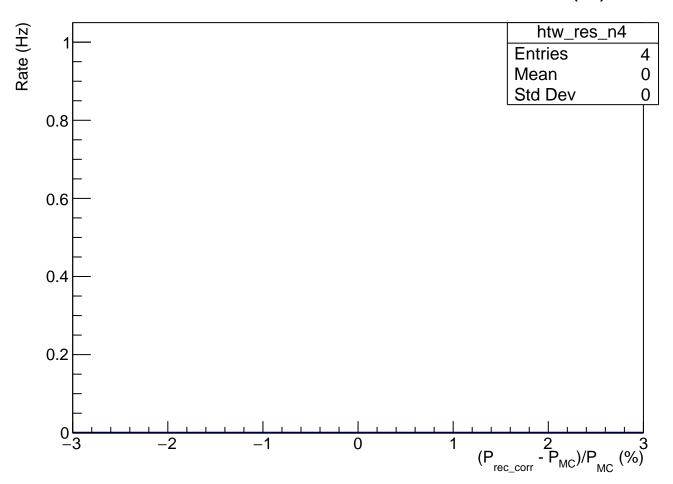
### n Track θ\* Resolution Distribution (%)

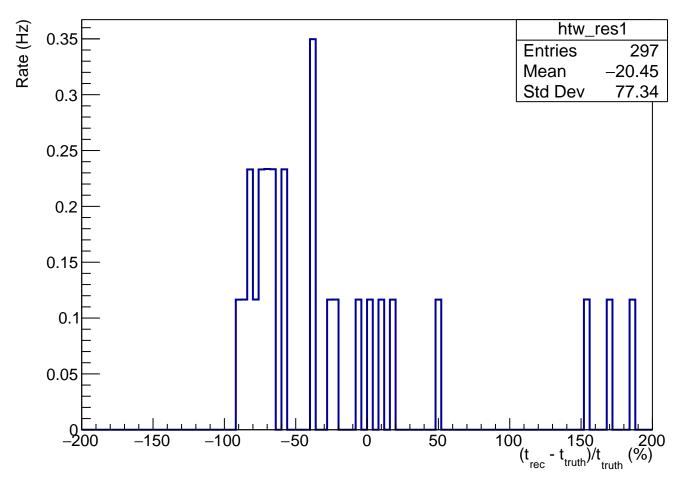


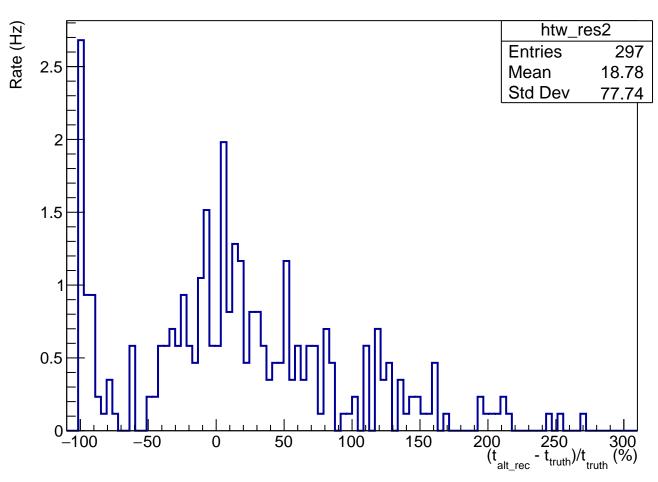
# n Track φ\* Resolution Distribution (%)

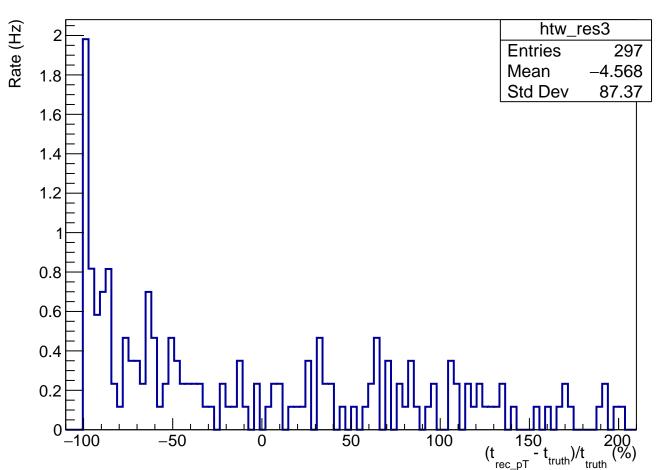


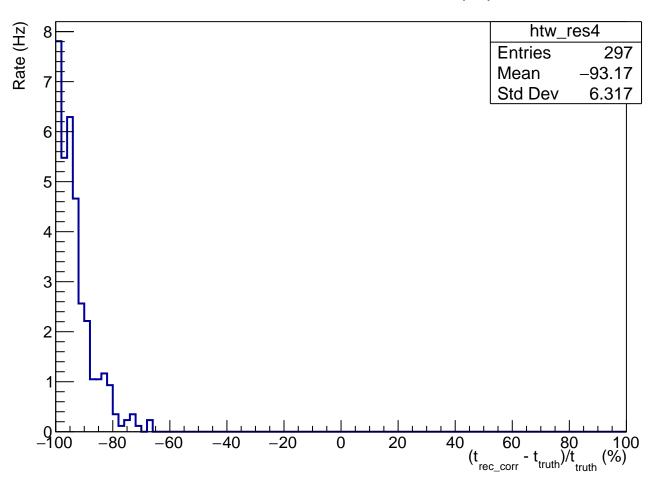
## n Track Momentum Resolution Distribution (%)



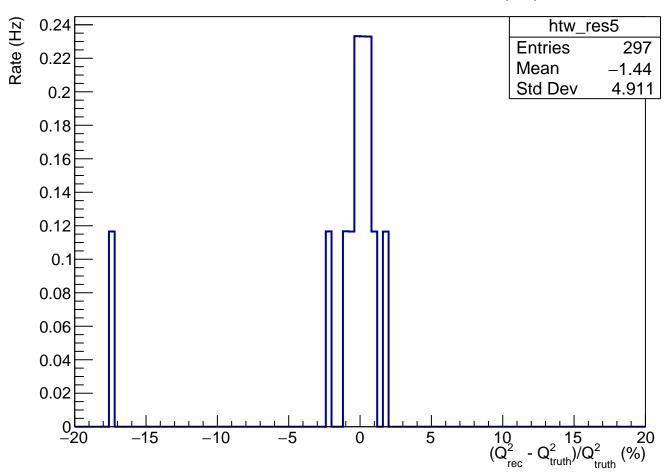


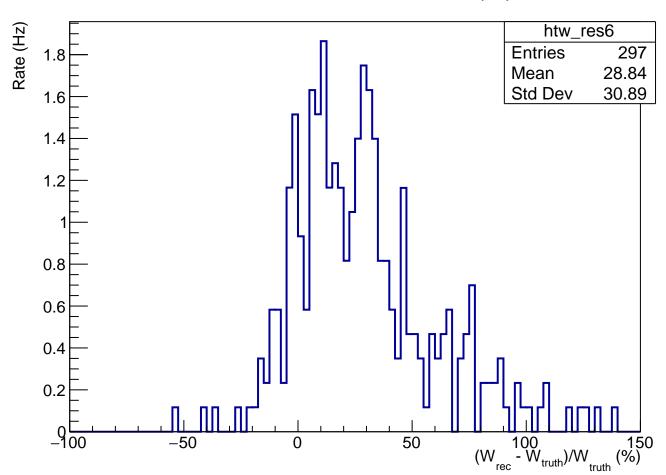


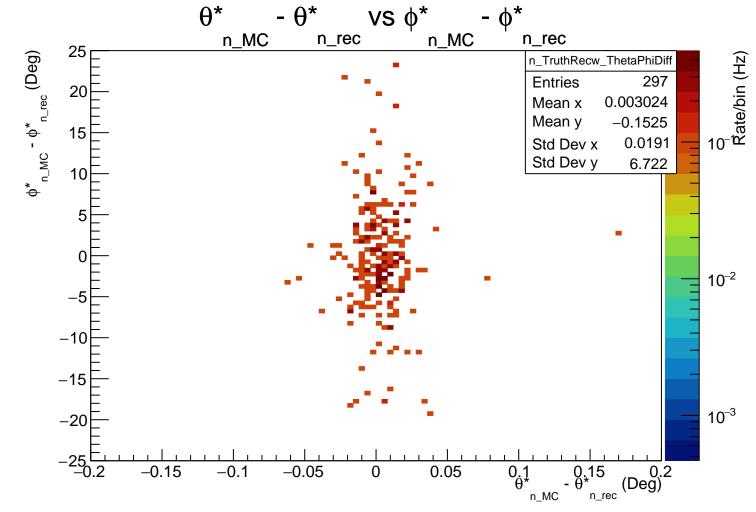




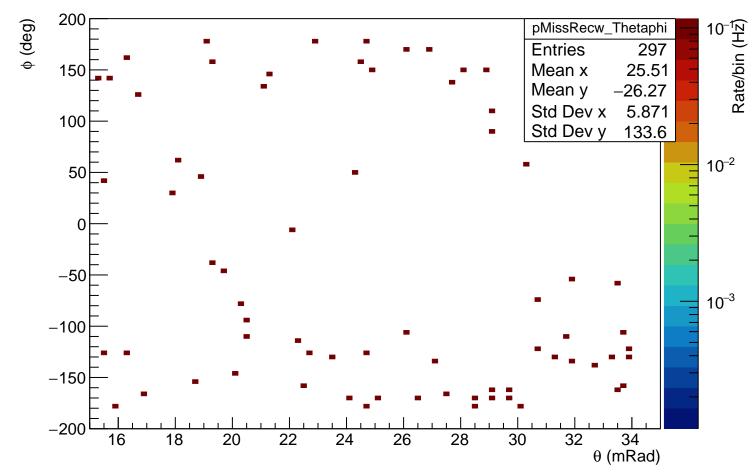
## Q<sup>2</sup> Resolution Distribution (%)



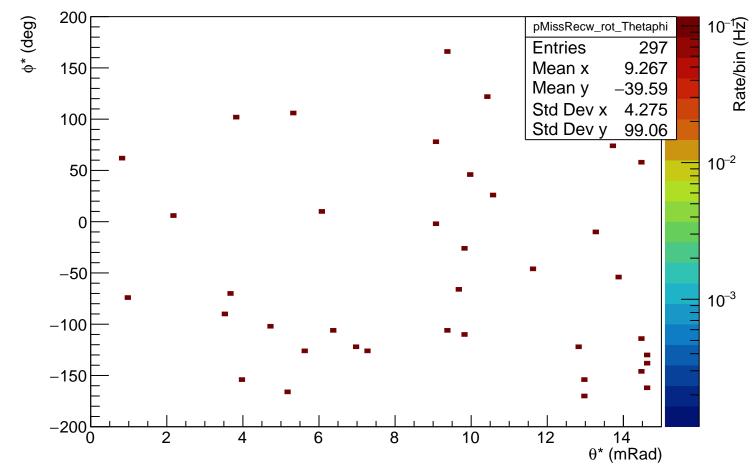


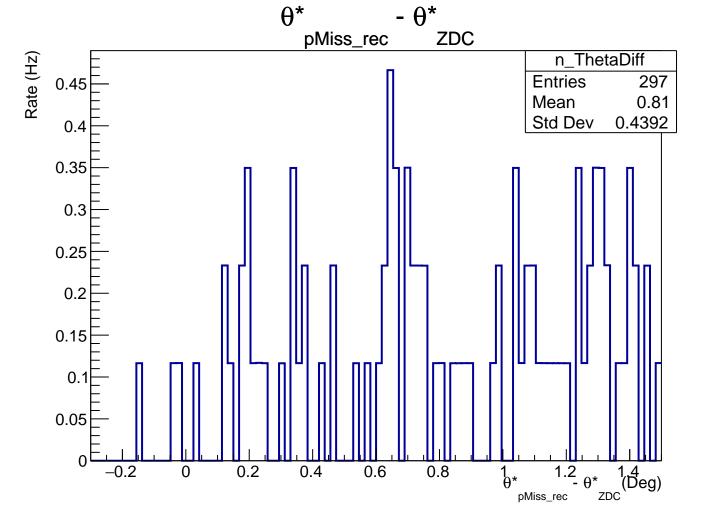


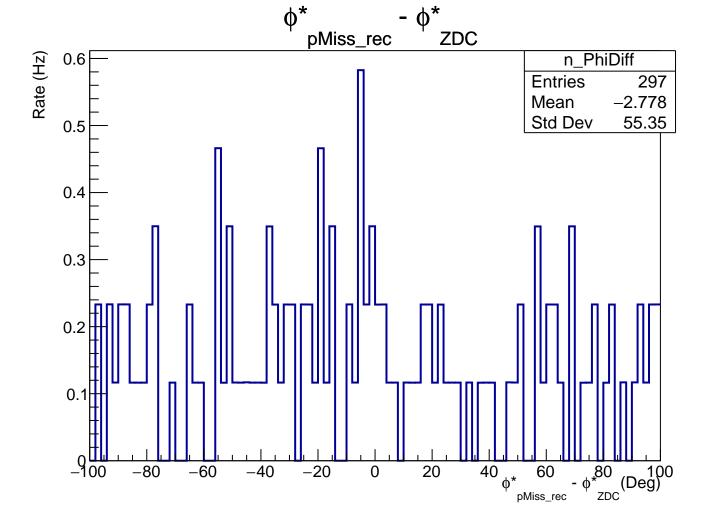
### pMiss rec $\theta$ vs $\phi$

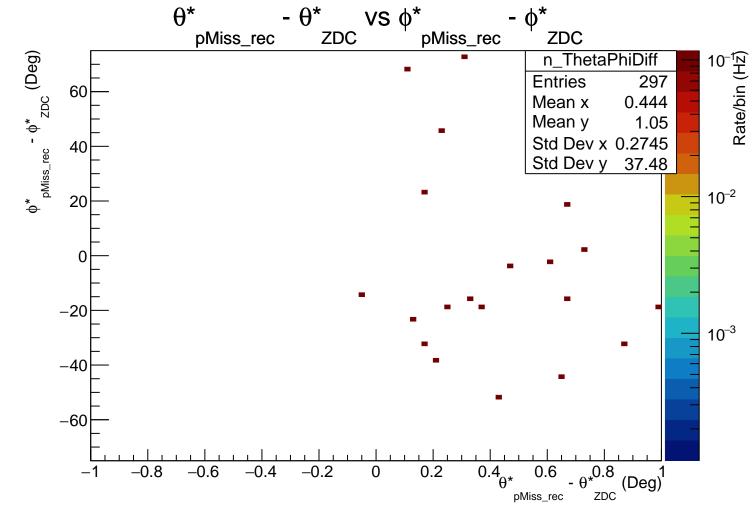


## pMiss rec $\theta^*$ vs $\phi^*$ around p axis

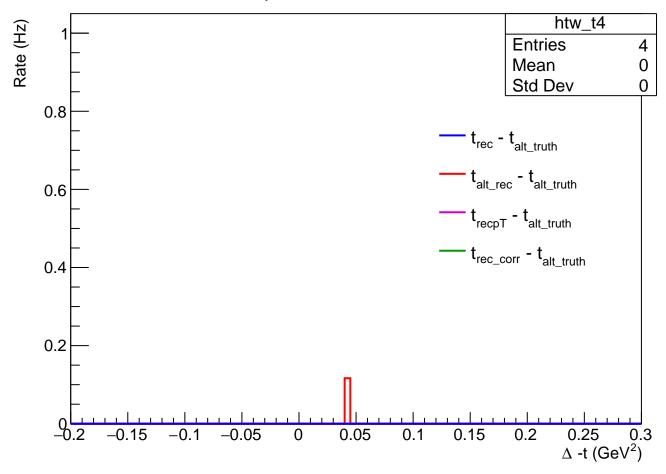


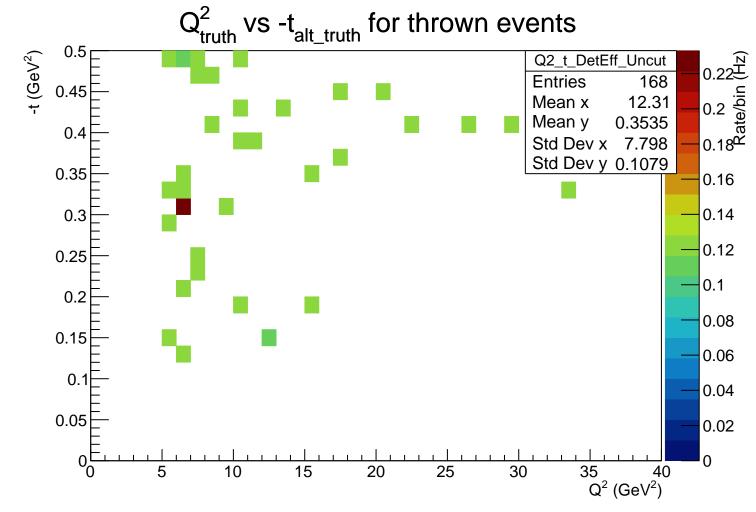


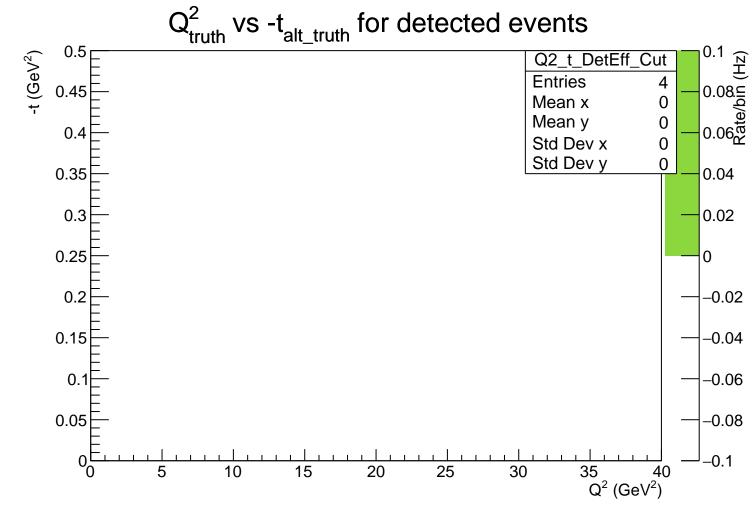




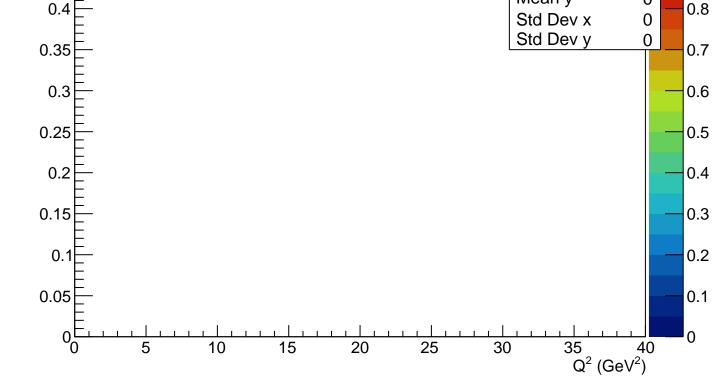
## -t<sub>rec, alt\_rec, rec\_pT, rec\_corr</sub> - -t<sub>alt\_truth</sub> Distribution







#### $vs - t_{alt\_truth} \ detected/thrown \ ratio$ Q2\_t\_DetEff **Entries** 168 0.9 Mean x 0 Mean y 0 Std Dev x 0 Std Dev y 0

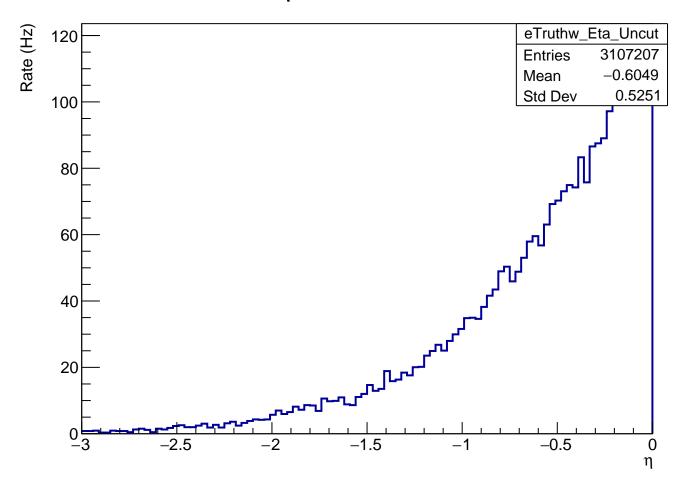


0.5

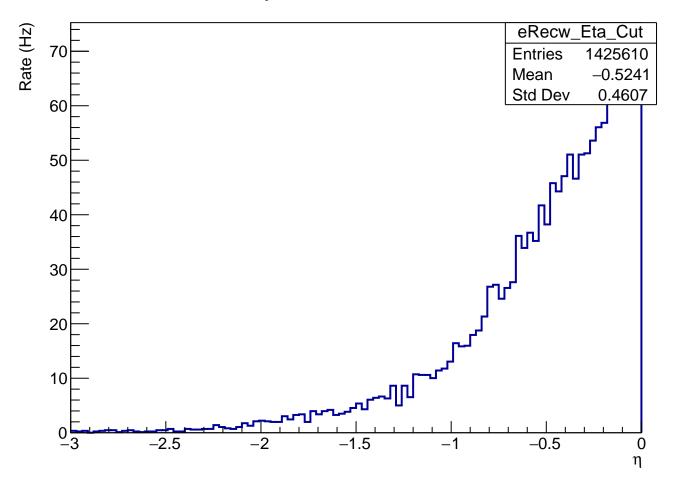
0.45

 $-t (GeV^2)$ 

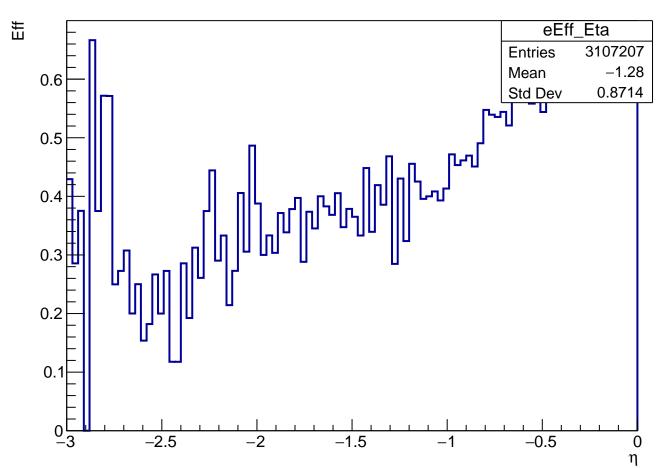
#### $e^{\prime}$ $\eta$ for thrown events



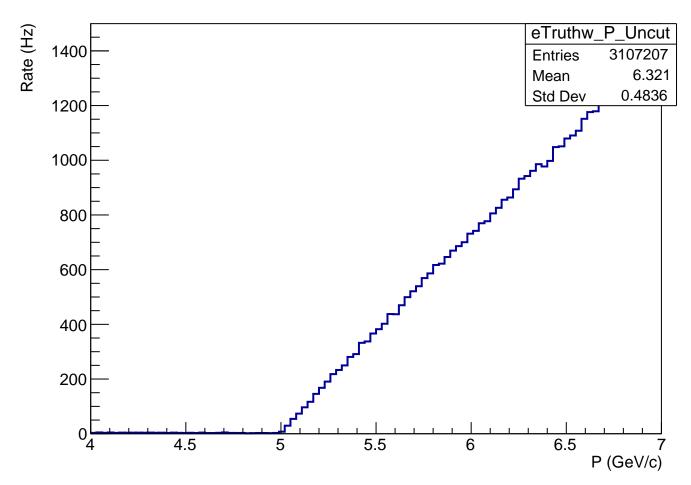
#### e' $\eta$ for detected events



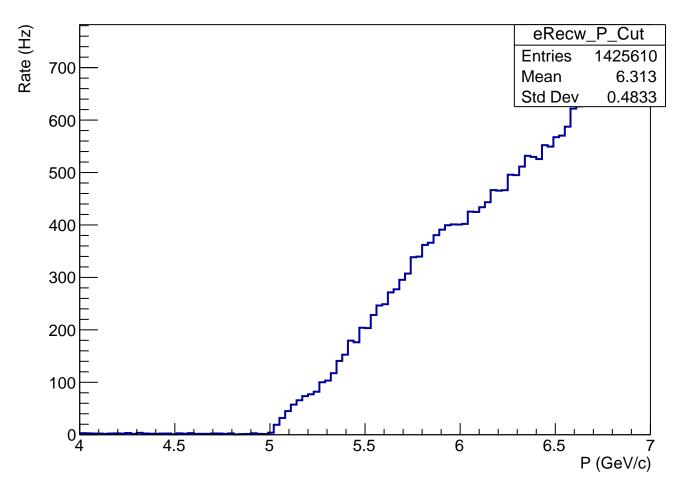
### e' Tracking efficiency as fn of $\eta$



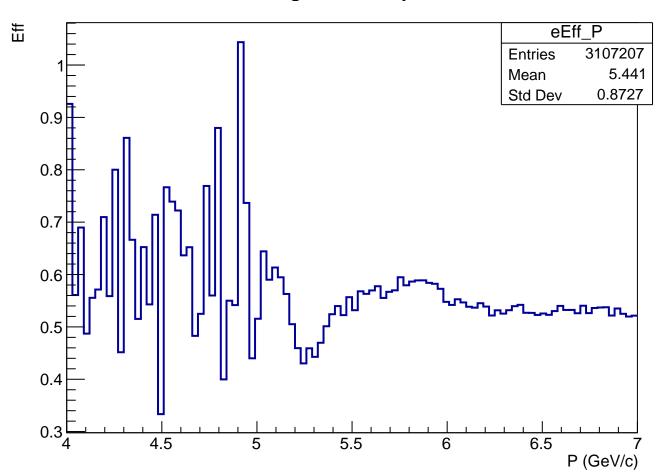
#### e' P for thrown events



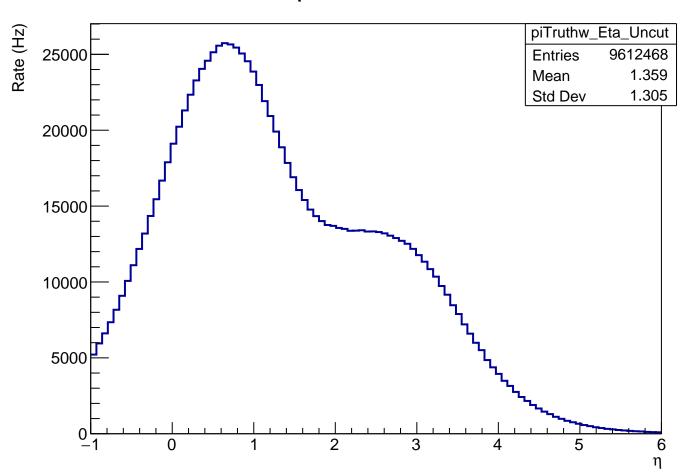
#### e' P for detected events



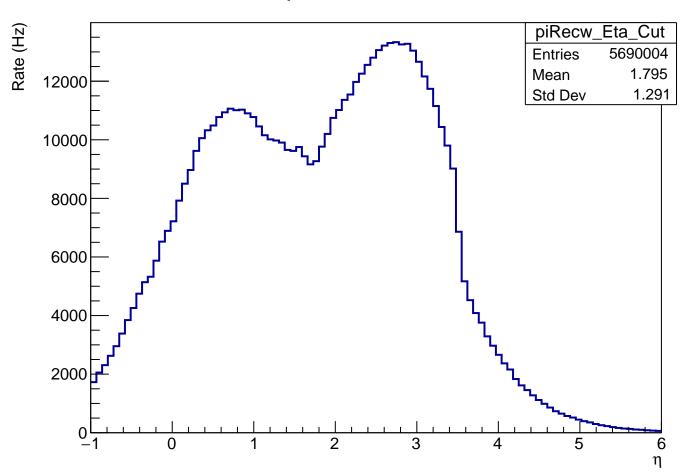
#### e' Tracking efficiency as fn of P



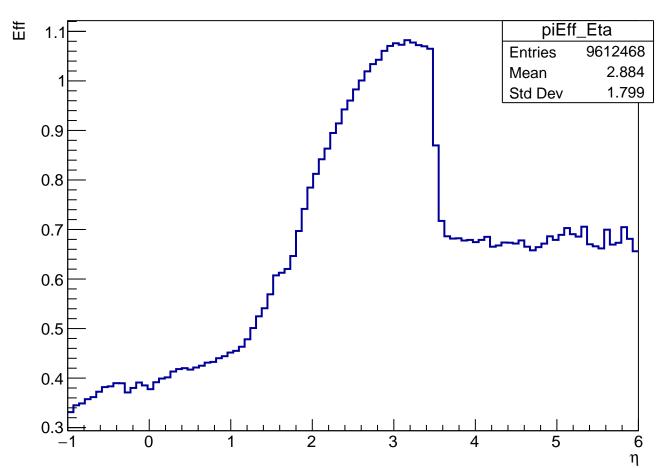
#### $\pi^+$ $\eta$ for thrown events



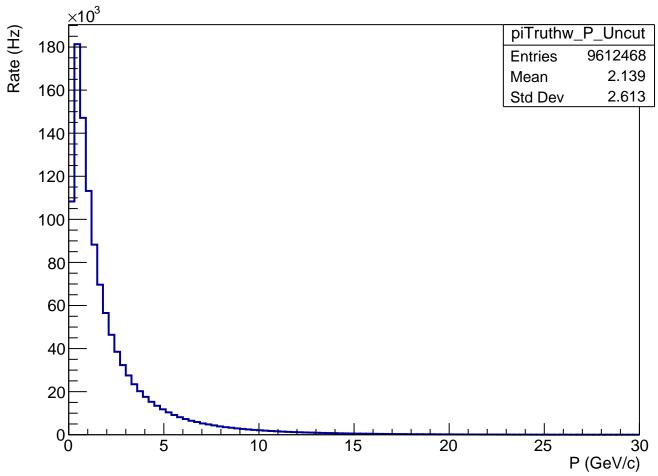
#### $\pi^+$ $\eta$ for detected events



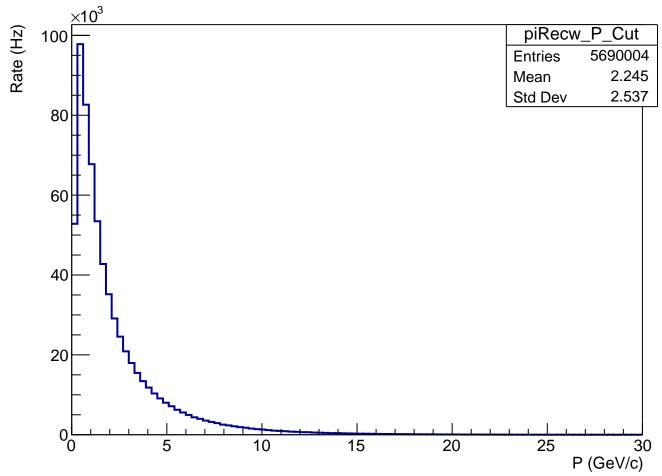
### $\pi^{+}$ Tracking efficiency as fn of $\eta$



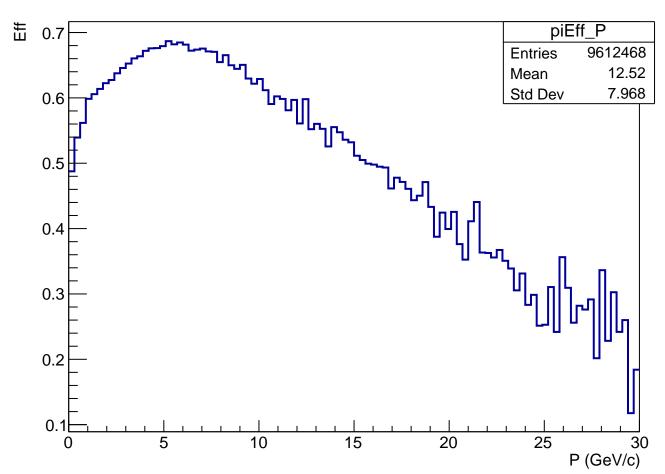
#### $\pi^+$ P for thrown events



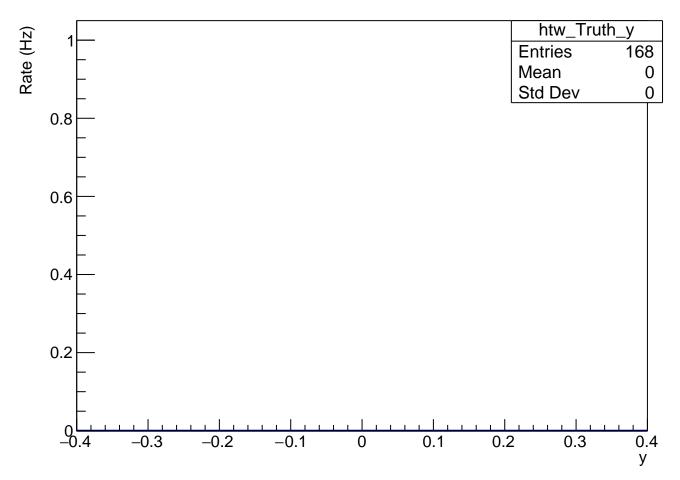
#### $\pi^+$ P for detected events



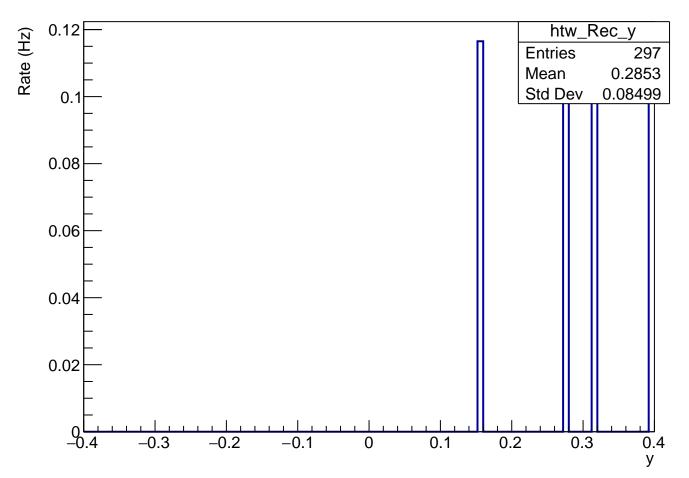
#### $\pi^+$ Tracking efficiency as fn of P



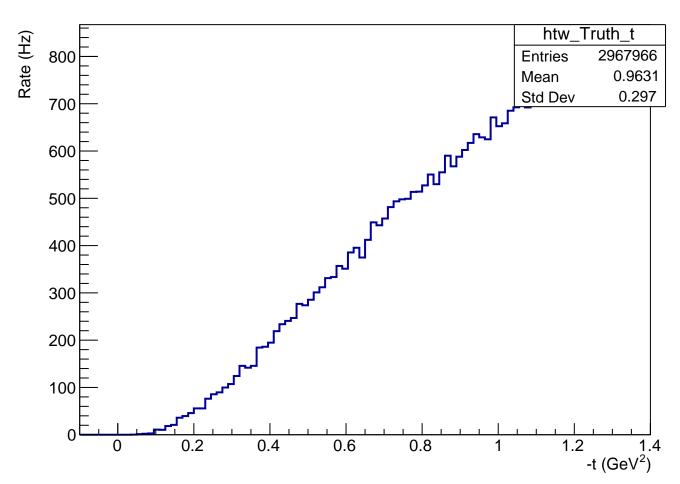
### y truth Distribution



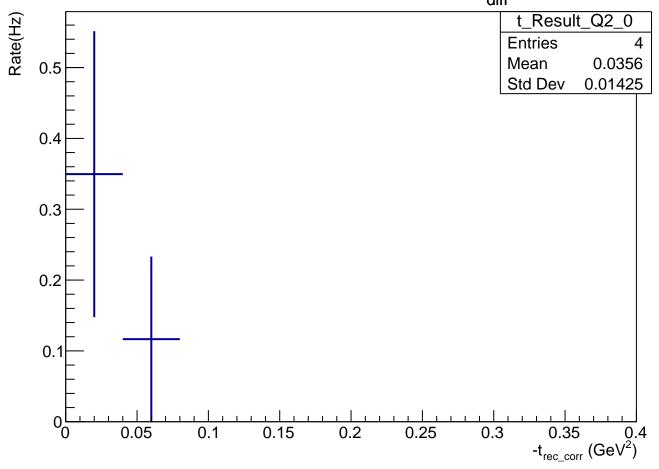
#### y rec Distribution



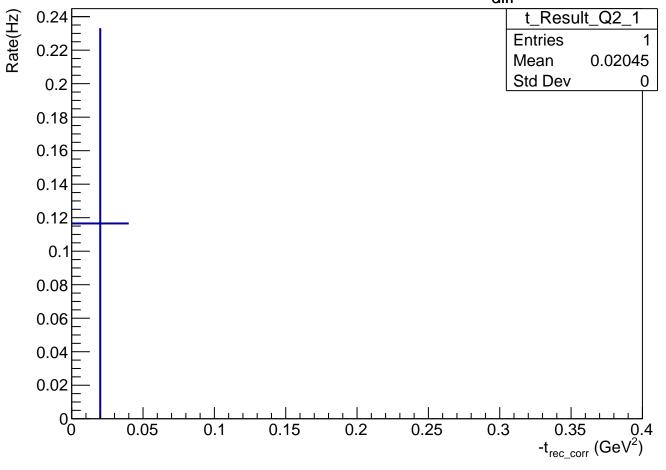
#### -t truth Distribution



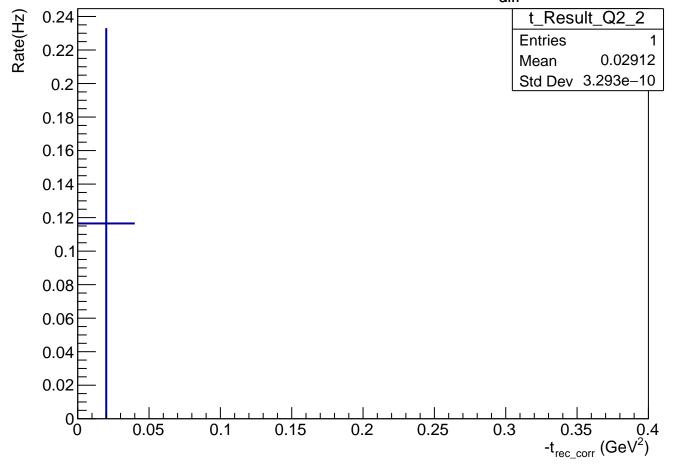
## -t dist w/ $5.0 < Q^2 < 35.0,$ -t, $\theta_{\text{diff}}$ , $\varphi_{\text{diff}}$ , W cuts



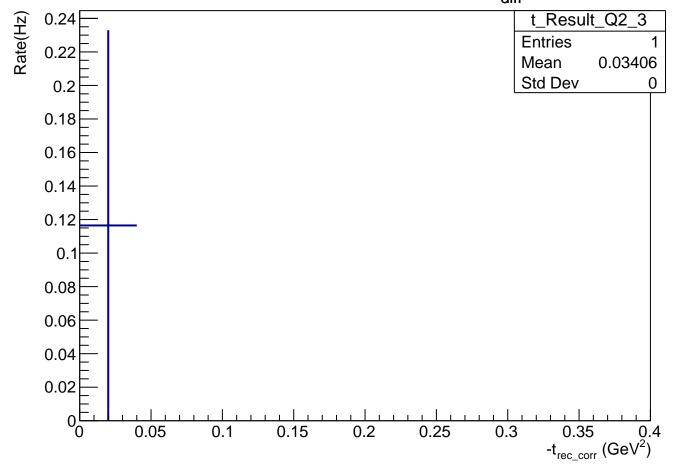
# -t dist w/ 5.0 < Q² < 7.5, -t, $\theta_{diff}$ , $\varphi_{diff}$ , W cuts



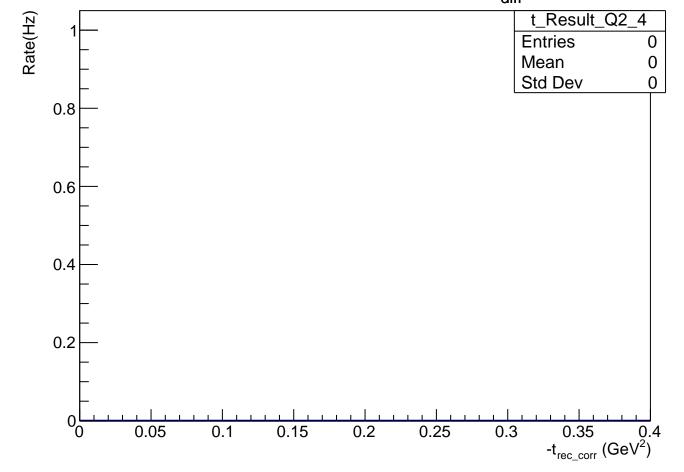
## -t dist w/ 7.5 < Q^2 < 10.0, -t, $\theta_{\text{diff}}$ , $\varphi_{\text{diff}}$ , W cuts



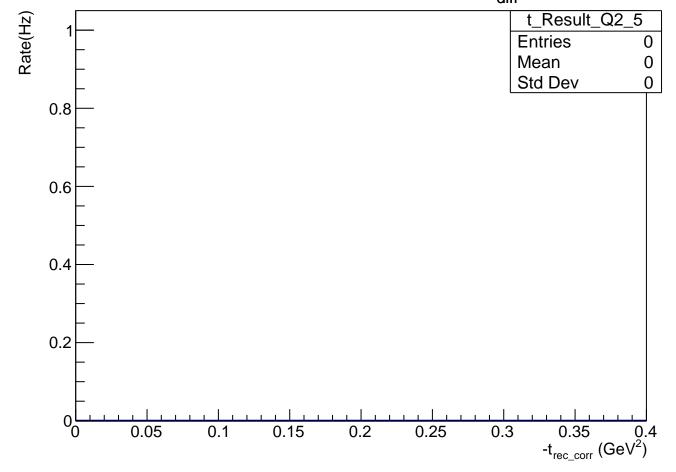
-t dist w/ 10.0 <  $Q^2$  < 15.0, -t,  $\theta_{diff}$  ,  $\varphi_{diff}$  , W cuts



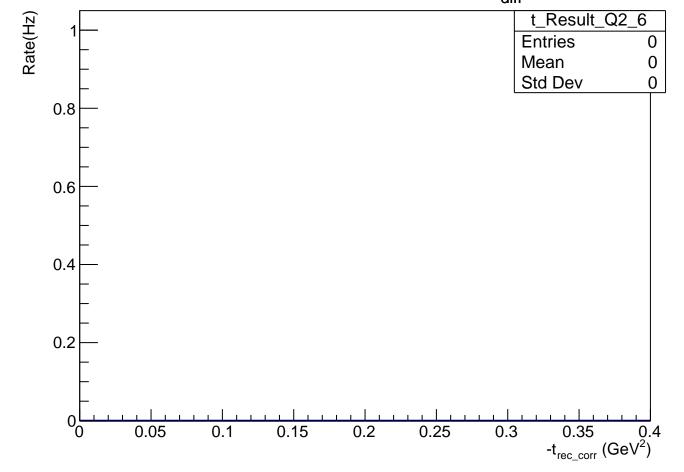
-t dist w/ 15.0 < Q² < 20.0, -t,  $\theta_{diff}$  ,  $\phi_{diff}$ , W cuts



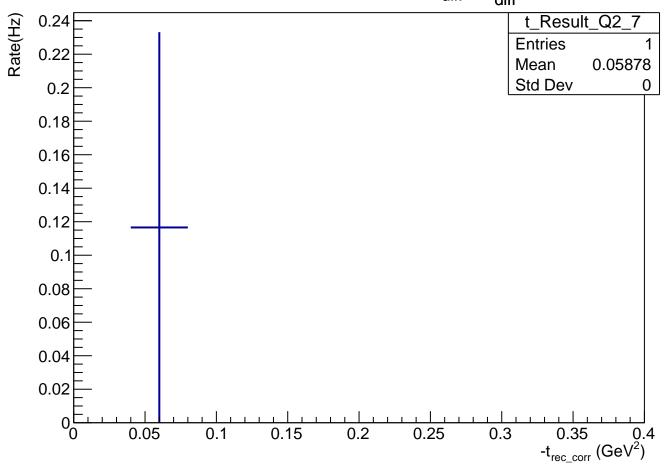
-t dist w/ 20.0 < Q² < 25.0, -t,  $\theta_{diff}$  ,  $\phi_{diff}$ , W cuts



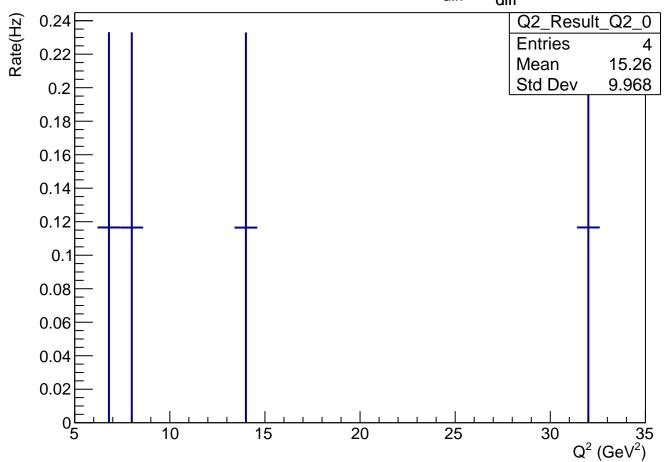
-t dist w/ 25.0 < Q² < 30.0, -t,  $\theta_{diff}$  ,  $\phi_{diff}$ , W cuts



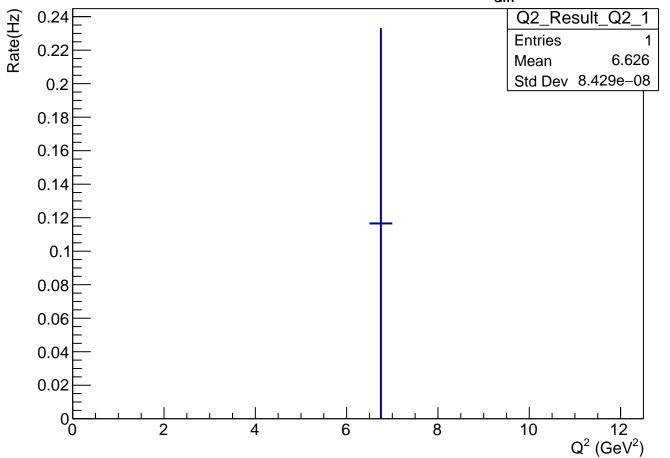
#### -t dist w/ 30.0 < Q² < 35.0, -t, $\theta_{\text{diff}}$ , $\phi_{\text{diff}}$ , W cuts

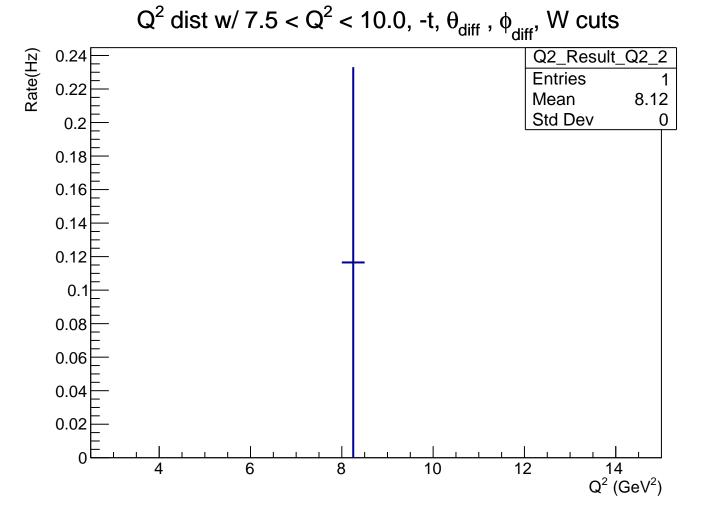


#### $Q^2$ dist w/ 5.0 < $Q^2$ < 35.0, -t, $\theta_{diff}$ , $\phi_{diff}$ , W cuts

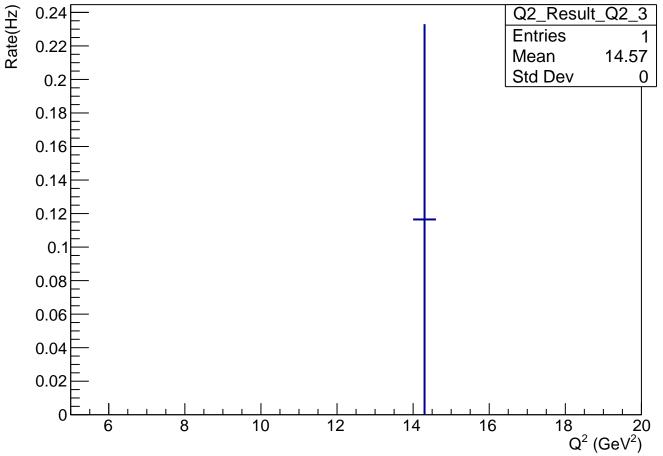


# $Q^2$ dist w/ 5.0 < $Q^2$ < 7.5, -t, $\theta_{diff}$ , $\varphi_{diff}$ , W cuts

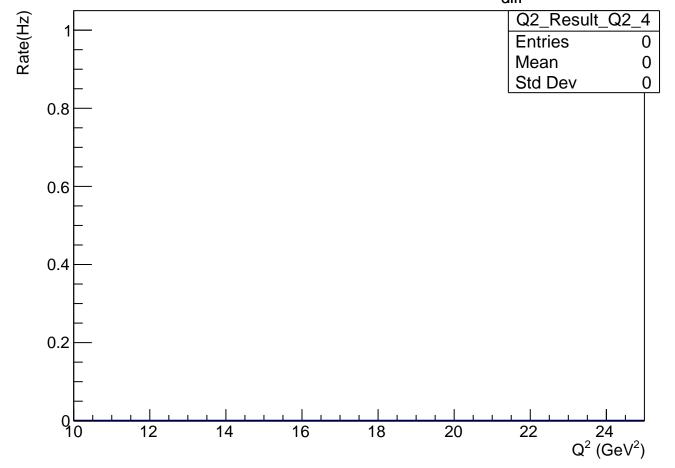




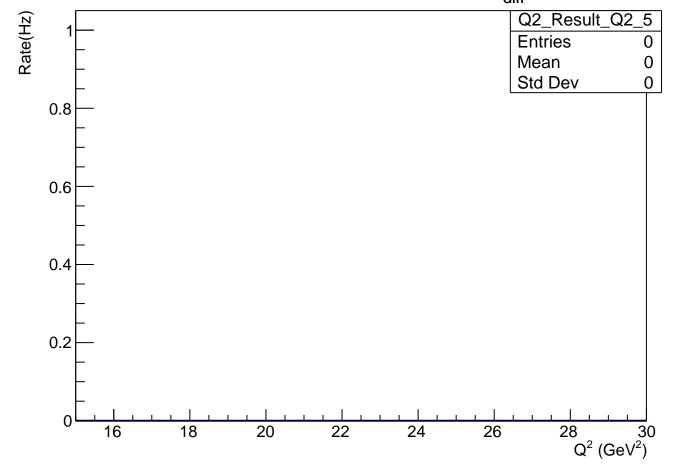
#### $Q^2$ dist w/ 10.0 < $Q^2$ < 15.0, -t, $\theta_{diff}$ , $\phi_{diff}$ , W cuts



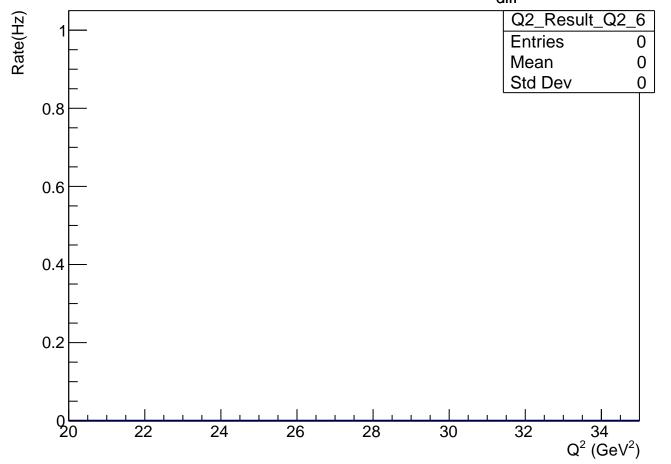
## $Q^2$ dist w/ 15.0 < $Q^2$ < 20.0, -t, $\theta_{diff}$ , $\varphi_{diff}$ , W cuts



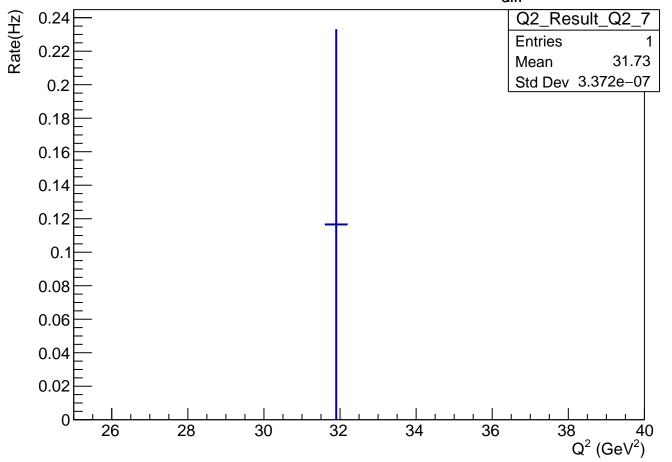
## $Q^2$ dist w/ 20.0 < $Q^2$ < 25.0, -t, $\theta_{diff}$ , $\varphi_{diff}$ , W cuts



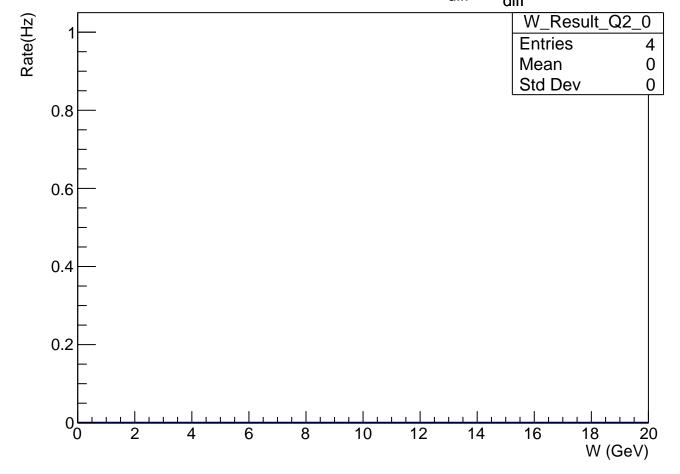
 $Q^2$  dist w/ 25.0 <  $Q^2$  < 30.0, -t,  $\theta_{diff}$  ,  $\varphi_{diff}$  , W cuts



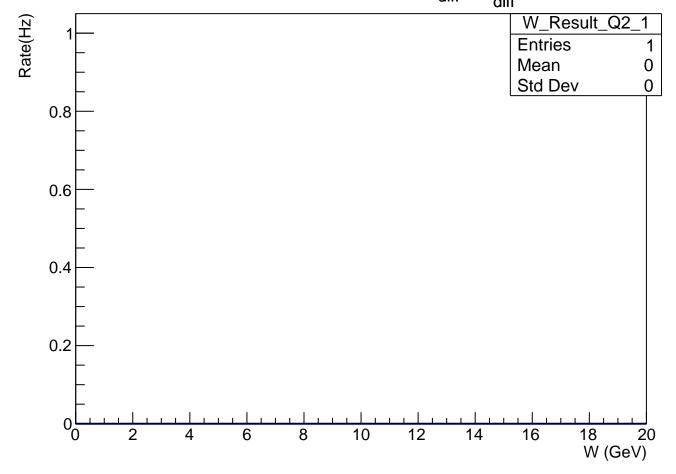
#### $Q^2$ dist w/ 30.0 < $Q^2$ < 35.0, -t, $\theta_{diff}$ , $\varphi_{diff}$ , W cuts



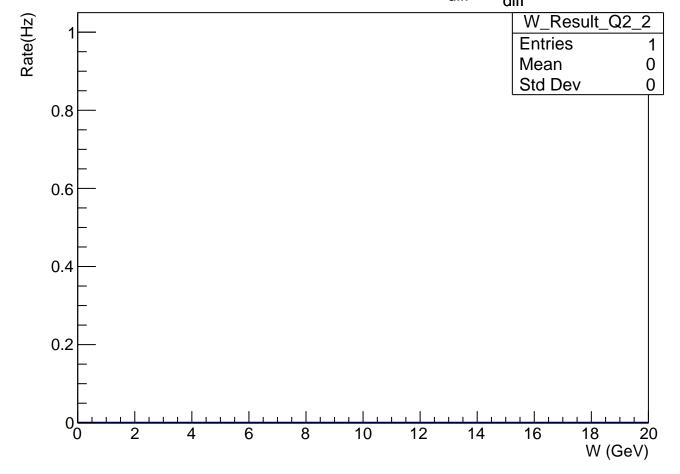
# W dist w/ 5.0 < $Q^2$ < 35.0, -t, $\theta_{diff}$ , $\phi_{diff}$ , W cuts



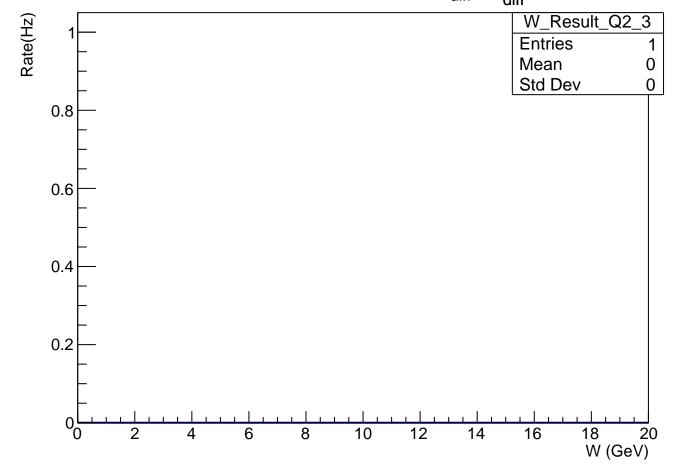
# W dist w/ 5.0 < Q² < 7.5, -t, $\theta_{\text{diff}}$ , $\phi_{\text{diff}}$ , W cuts



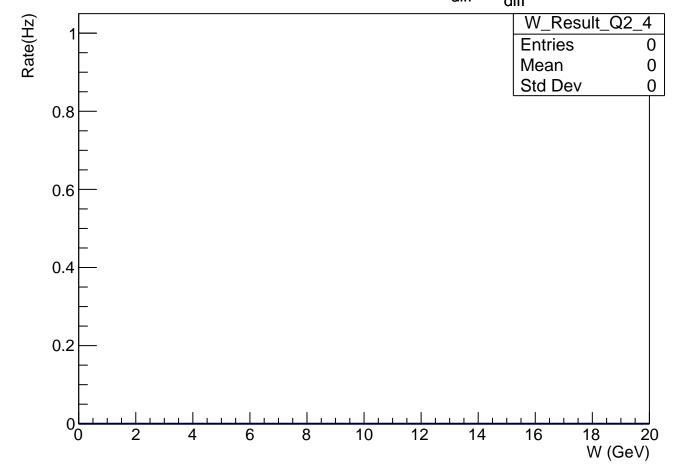
# W dist w/ 7.5 < $Q^2$ < 10.0, -t, $\theta_{diff}$ , $\phi_{diff}$ , W cuts



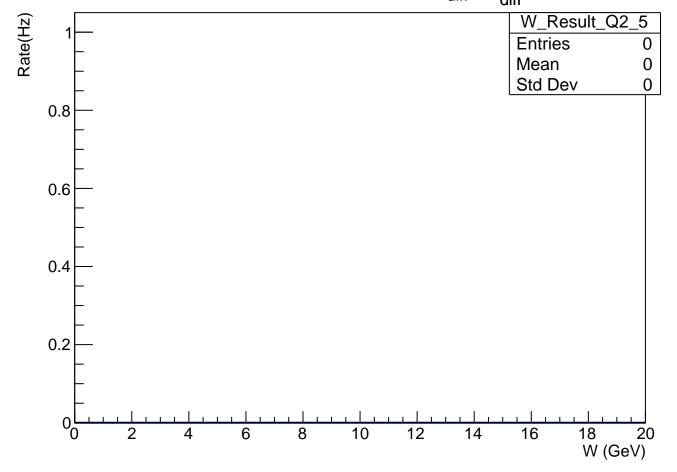
## W dist w/ 10.0 < Q^2 < 15.0, -t, $\theta_{\text{diff}}$ , $\varphi_{\text{diff}}$ , W cuts



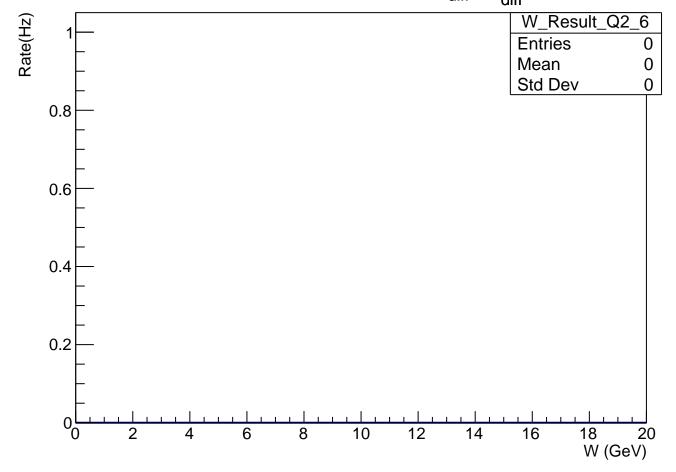
## W dist w/ 15.0 < Q^2 < 20.0, -t, $\theta_{\text{diff}}$ , $\varphi_{\text{diff}}$ , W cuts



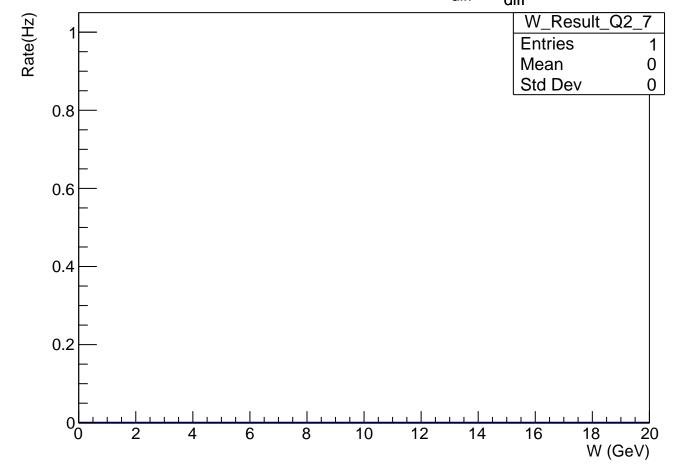
## W dist w/ 20.0 < Q^2 < 25.0, -t, $\theta_{\text{diff}}$ , $\varphi_{\text{diff}}$ , W cuts



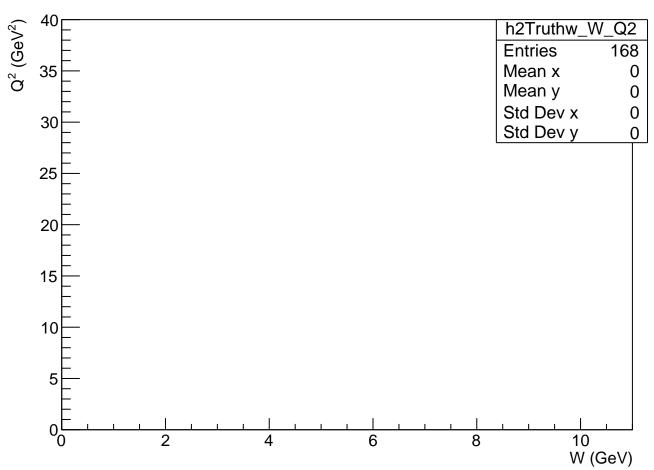
## W dist w/ 25.0 < Q^2 < 30.0, -t, $\theta_{\text{diff}}$ , $\varphi_{\text{diff}}$ , W cuts



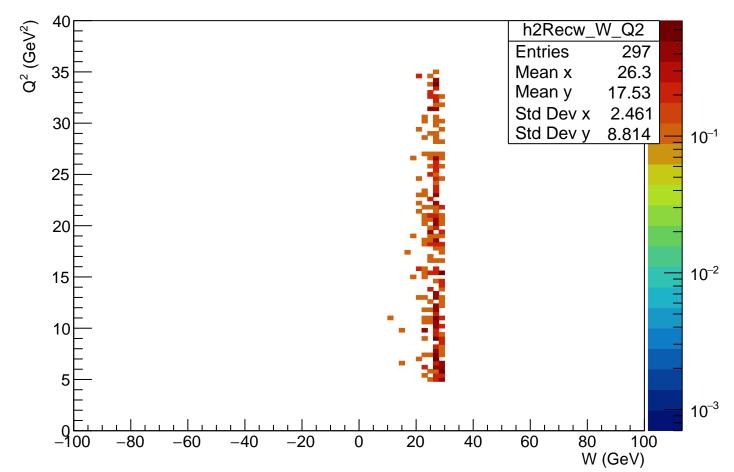
## W dist w/ 30.0 < Q<sup>2</sup> < 35.0, -t, $\theta_{diff}$ , $\phi_{diff}$ , W cuts



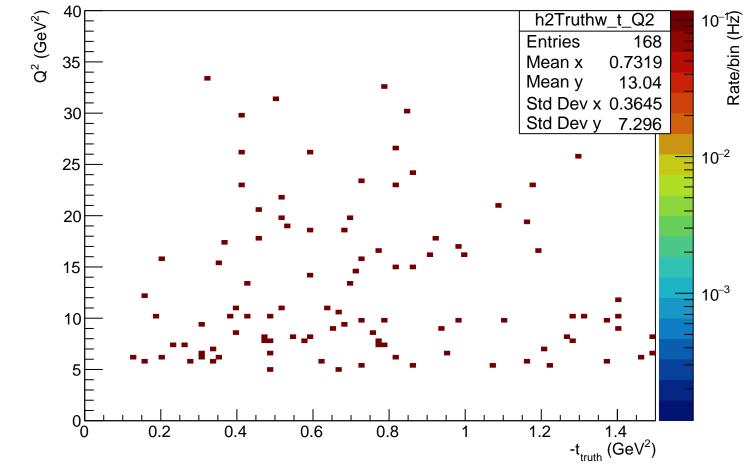
#### W vs Q<sup>2</sup> truth distribution



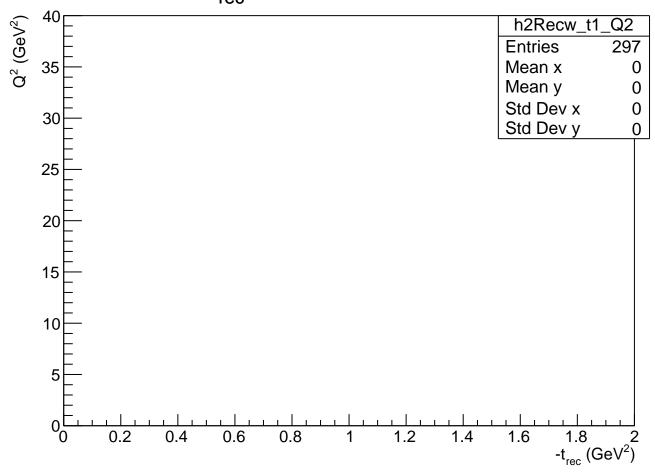
#### W vs Q<sup>2</sup> rec distribution



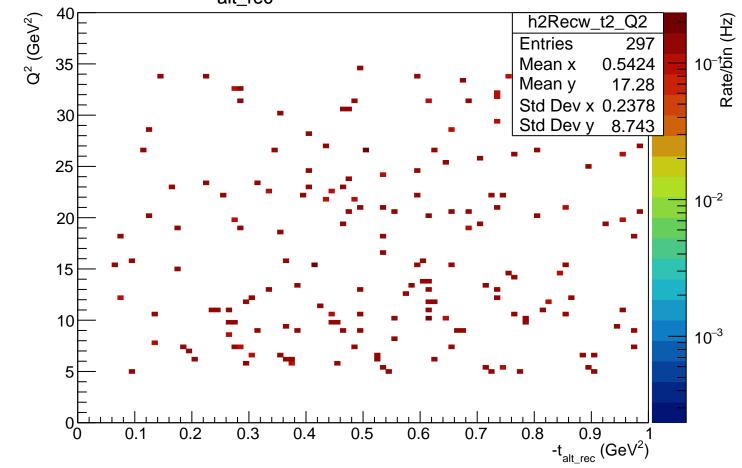
#### -t<sub>truth</sub> vs Q<sup>2</sup> truth distribution



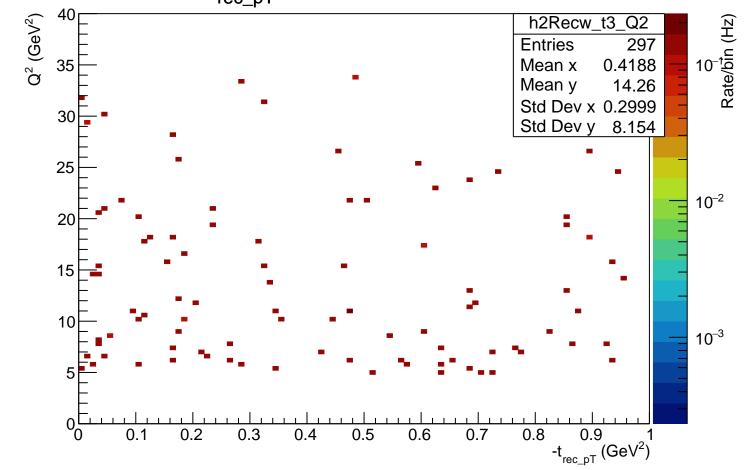
#### -t<sub>rec</sub> vs Q<sup>2</sup> rec distribution



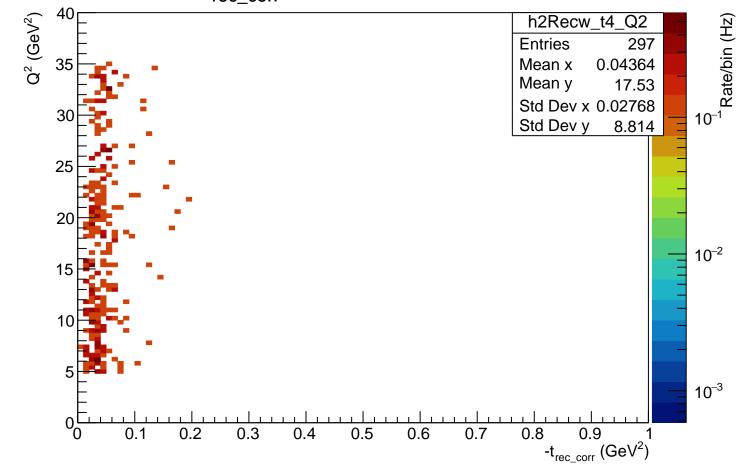
# $-t_{alt\_rec}$ vs $Q^2$ rec distribution



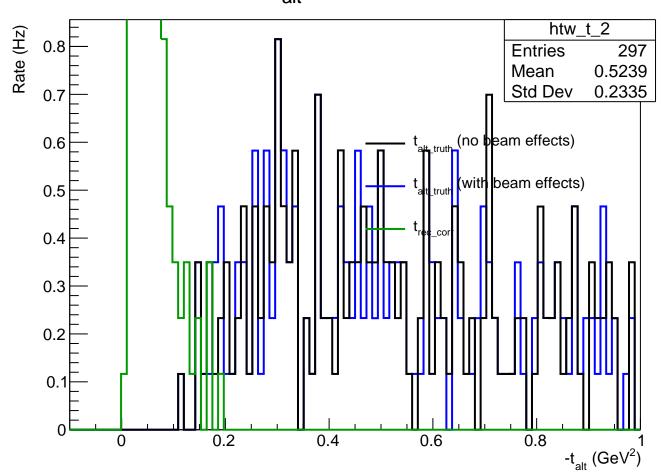
# $-t_{rec\_pT}$ vs $Q^2$ rec distribution



#### -t<sub>rec\_corr</sub> vs Q<sup>2</sup> rec distribution



#### -t<sub>alt</sub> Distribution



#### w rec Distribution w/ $5 < Q^2 < 35$

