

# zVertex Study

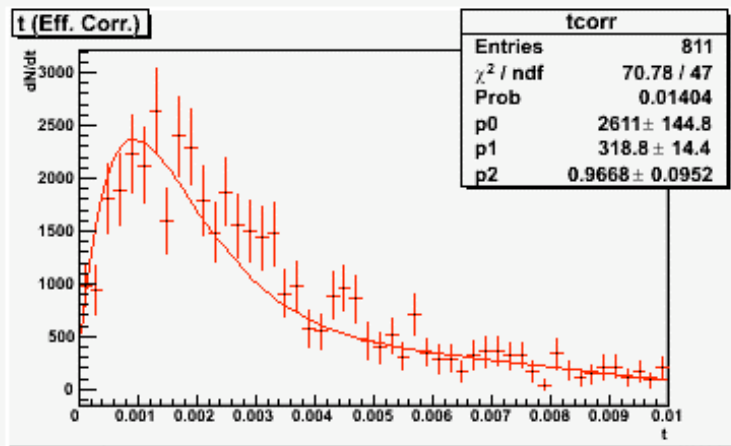
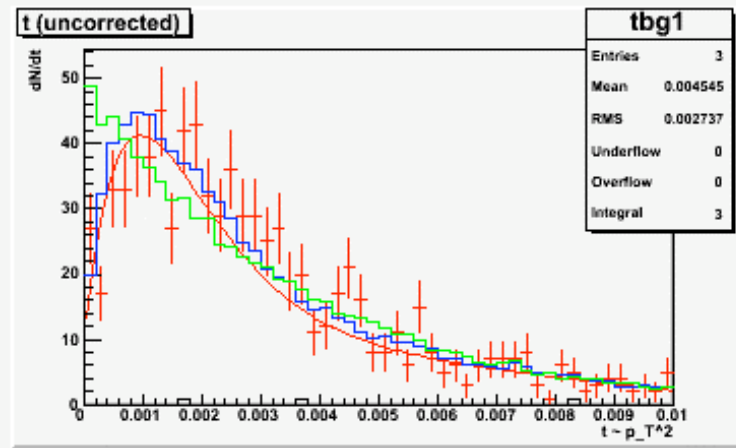
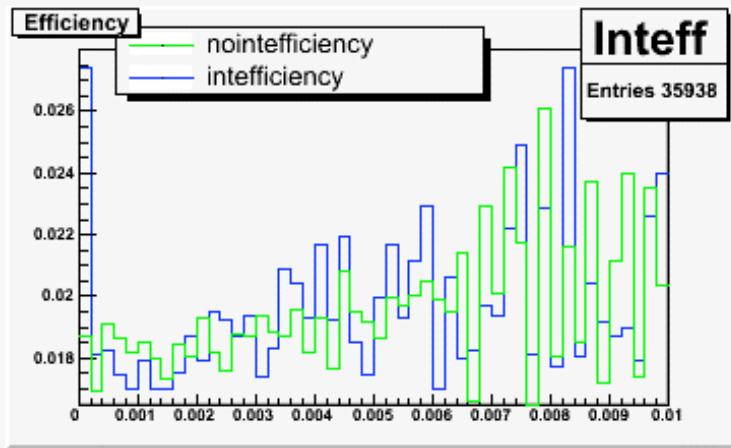
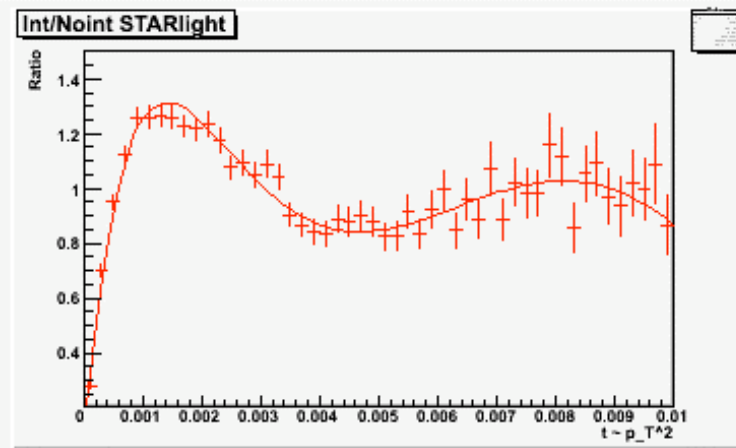
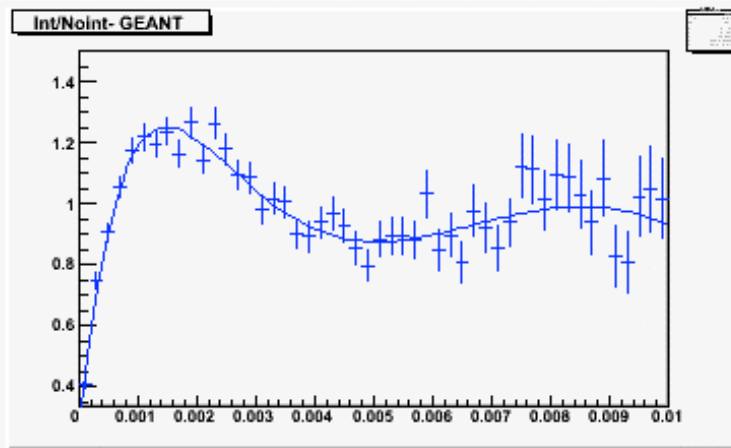
- Cuts were integrated into the analysis such that there were 6 different sets analyzed:
  - Minbias (with nuclear excitation)
    - zVertex > 0 and 0.1 < y < 0.5
    - zVertex > 0 and 0.5 < y < 1.0
    - zVertex < 0 and 0.1 < y < 0.5
    - zVertex < 0 and 0.1 < y < 0.5
  - Topology (without nuclear excitation)
    - zVertex > 0 and 0.1 < y < 0.5
    - zVertex > 0 and 0.5 < y < 1.0
    - zVertex < 0 and 0.1 < y < 0.5
    - zVertex < 0 and 0.1 < y < 0.5

The Interference / NoInterference ratio is computed from the MC sets generated with  $R_{nuc} = 6.8$  fm for the Minbias and  $R_{nuc} = 8.0$  fm for the Topology set.

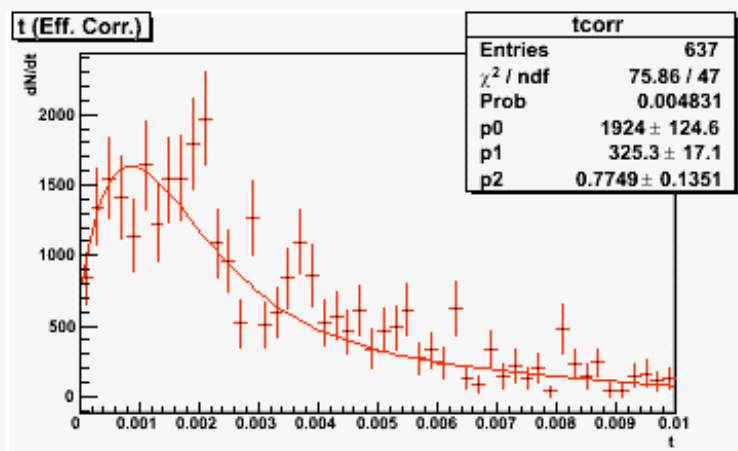
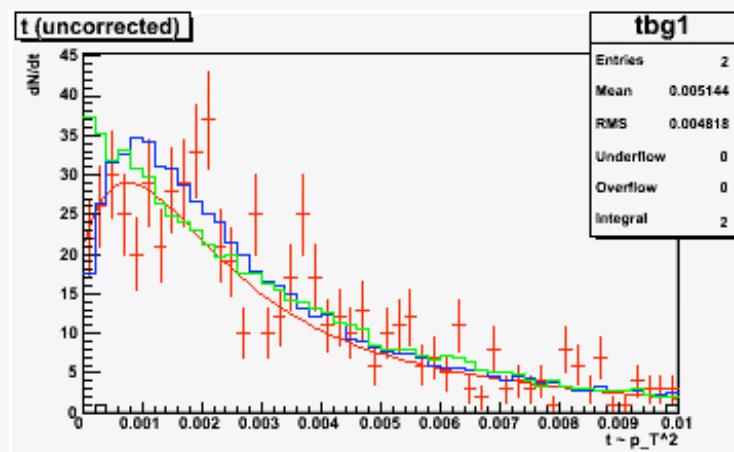
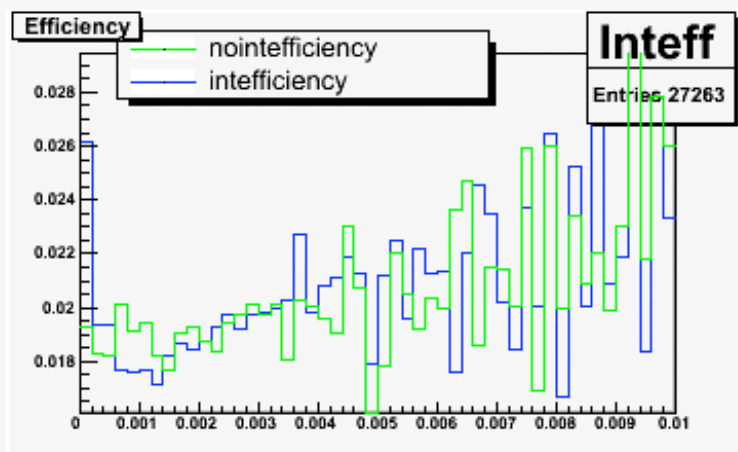
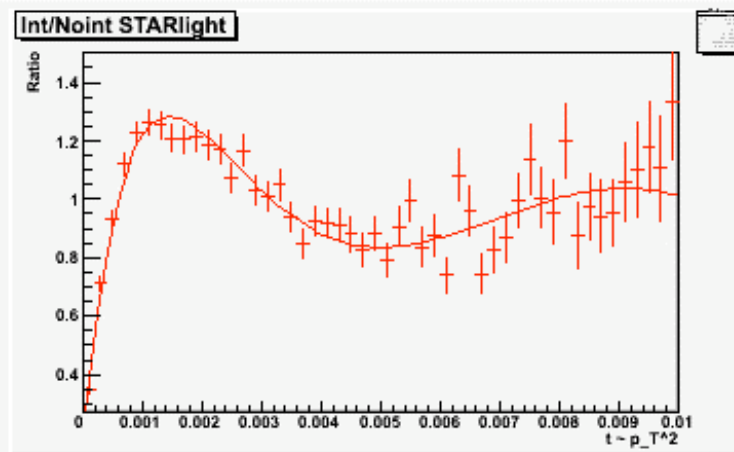
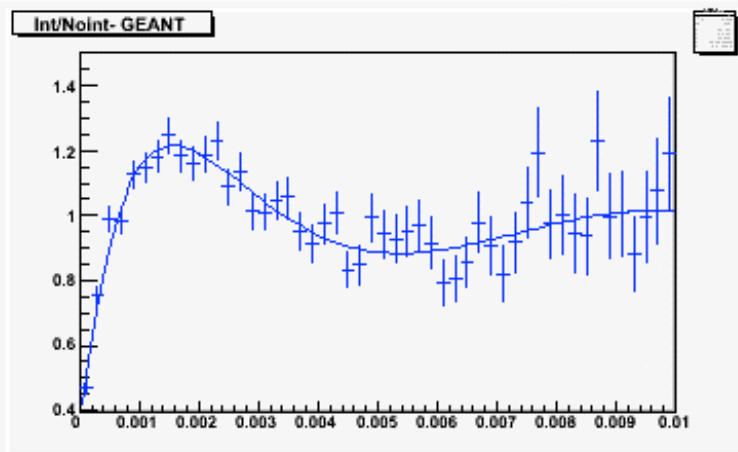
The function

$$R(t) = a + \frac{b}{(t+0.012)} + \frac{c}{(t+0.012)^2} + \frac{d}{(t+0.012)^3} + \frac{e}{(t+0.012)^4}$$

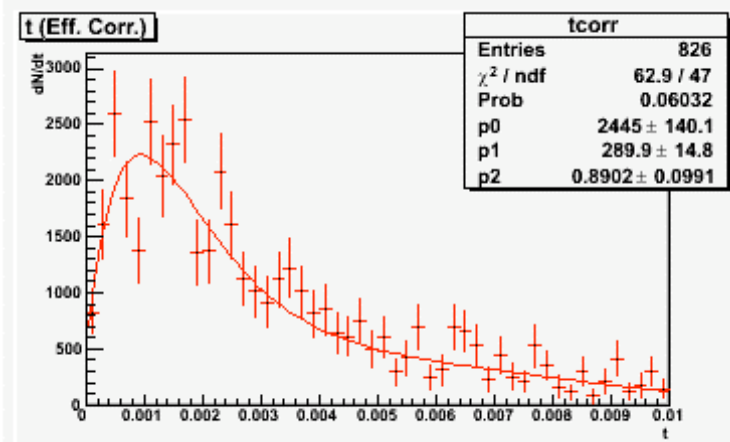
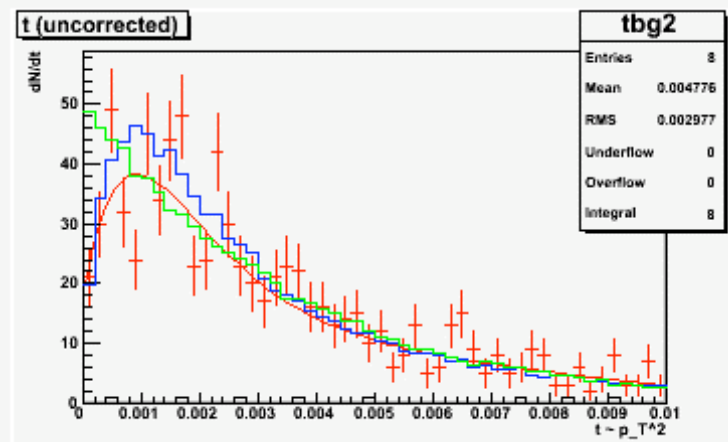
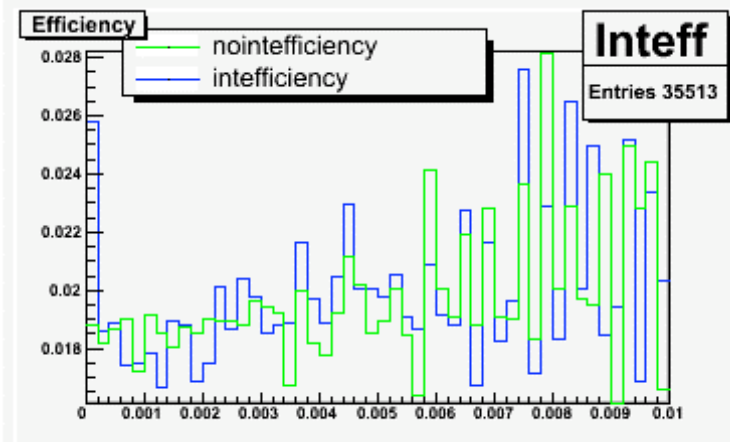
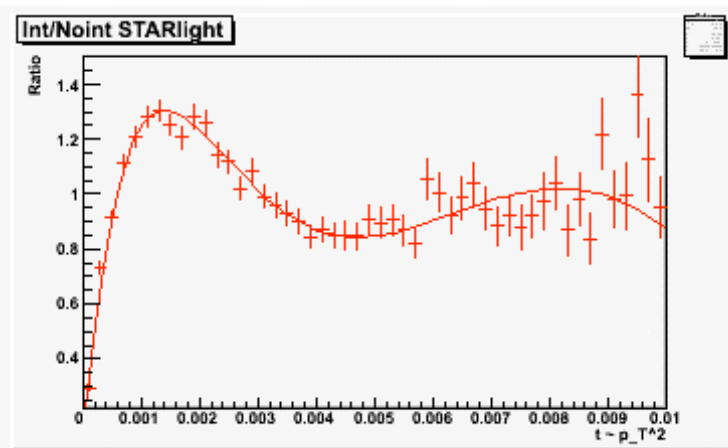
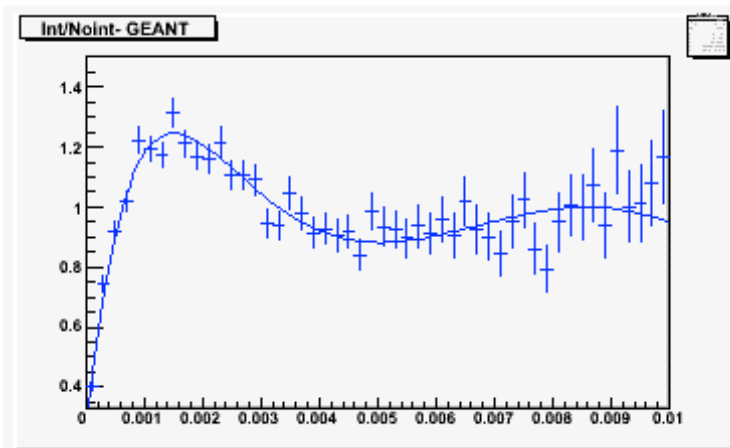
was used to fit the Interference / NoInterference ratio.



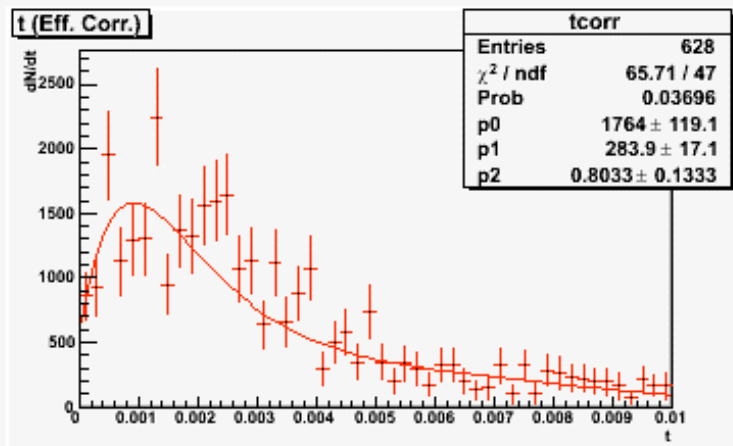
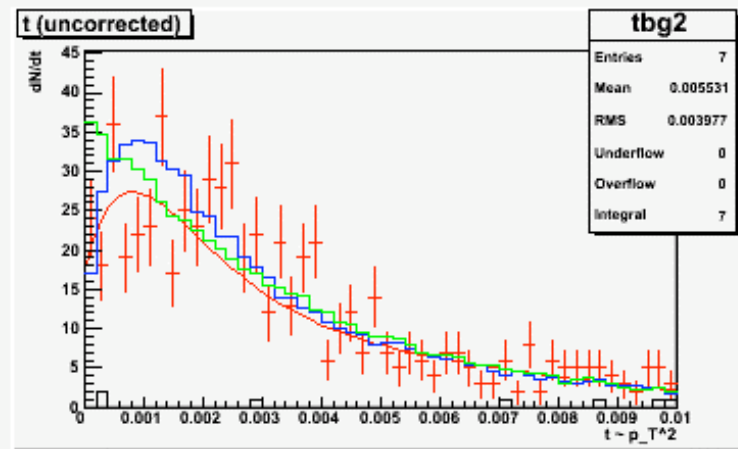
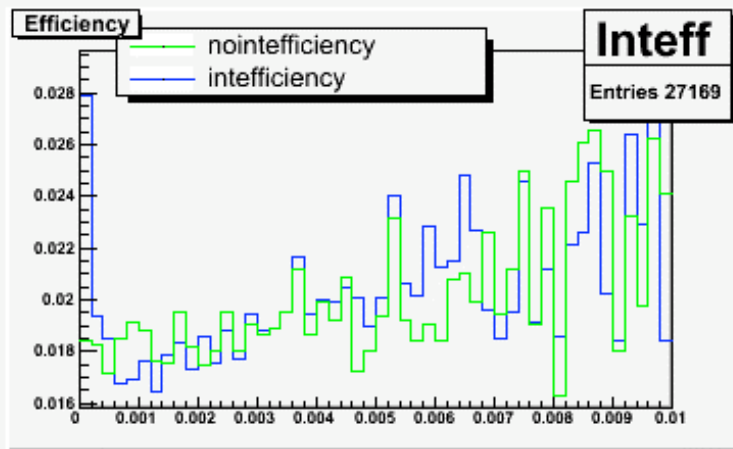
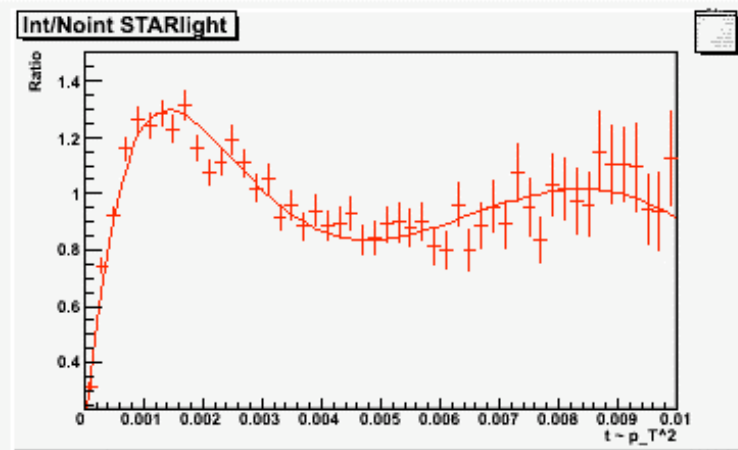
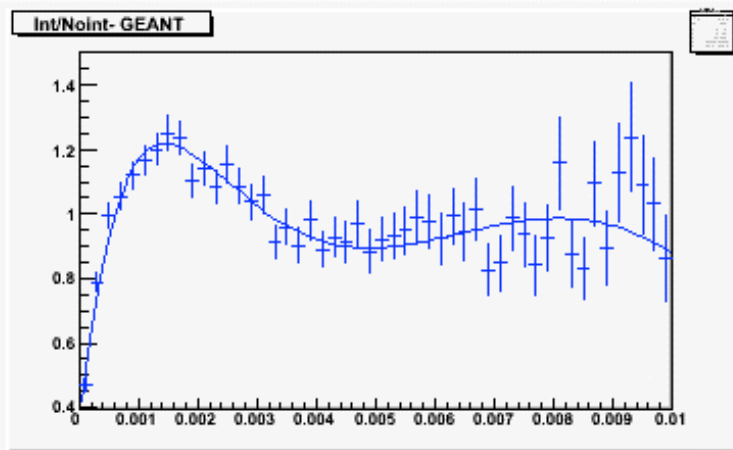
- minbias
- $z_{\text{Vertex}} > 0$
- $0.1 < y < 0.5$



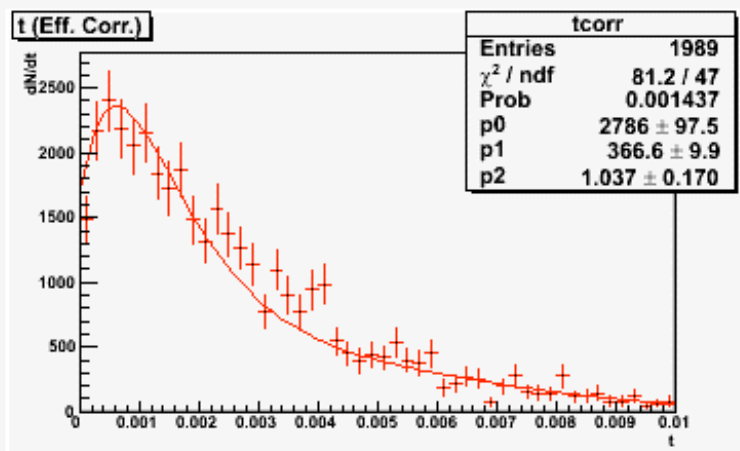
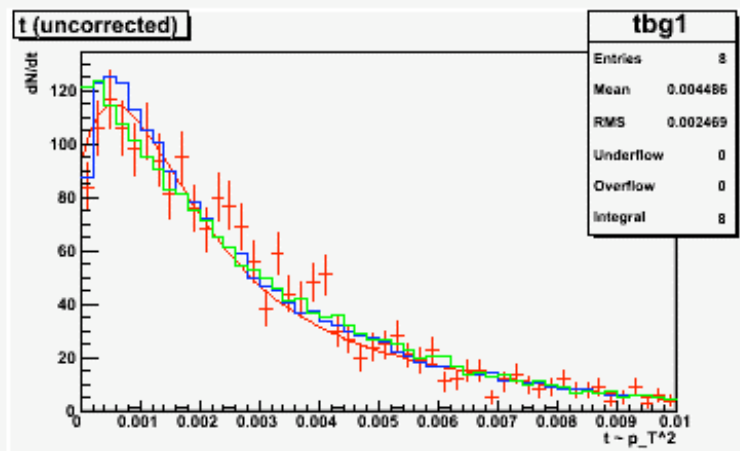
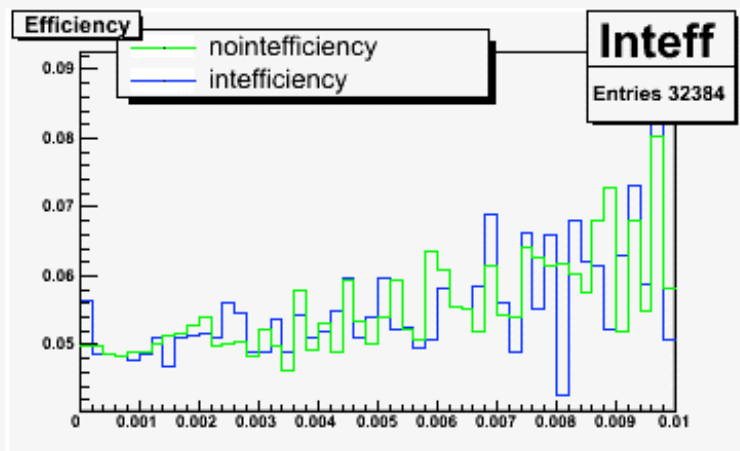
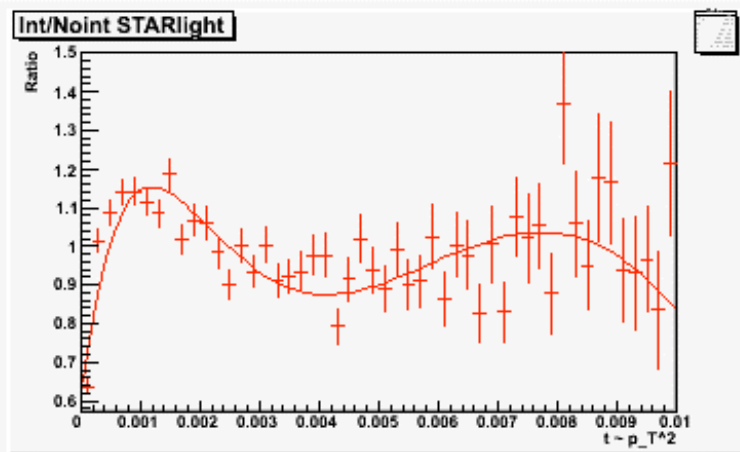
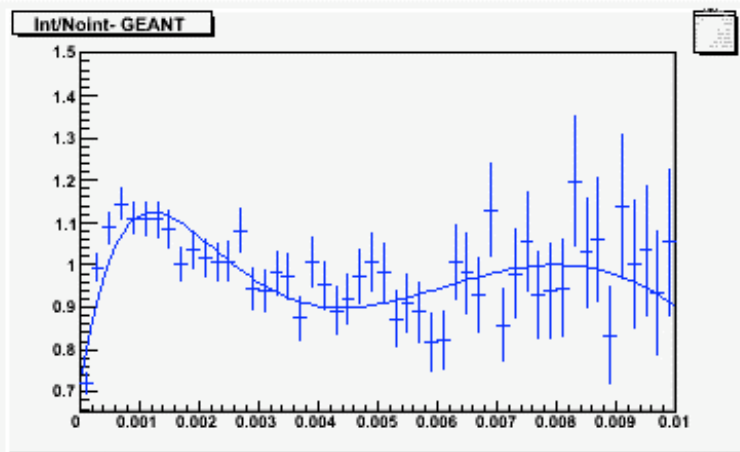
- minbias
- $z_{\text{Vertex}} > 0$
- $0.5 < y < 1.0$



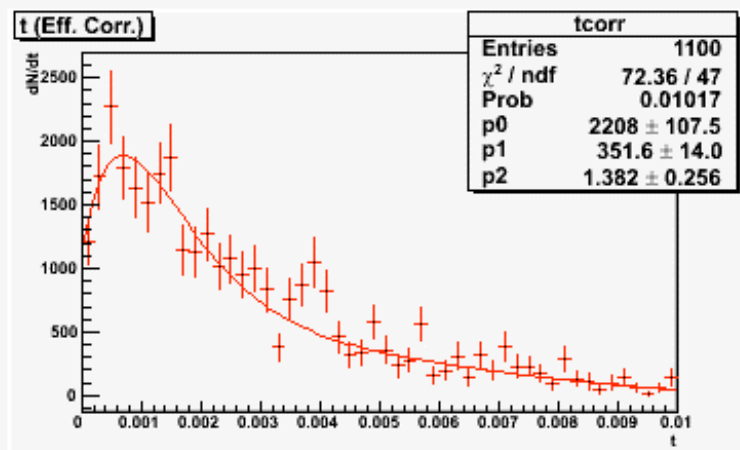
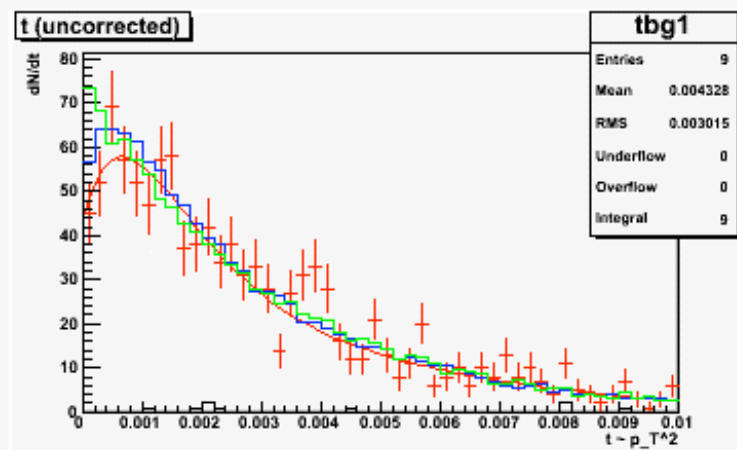
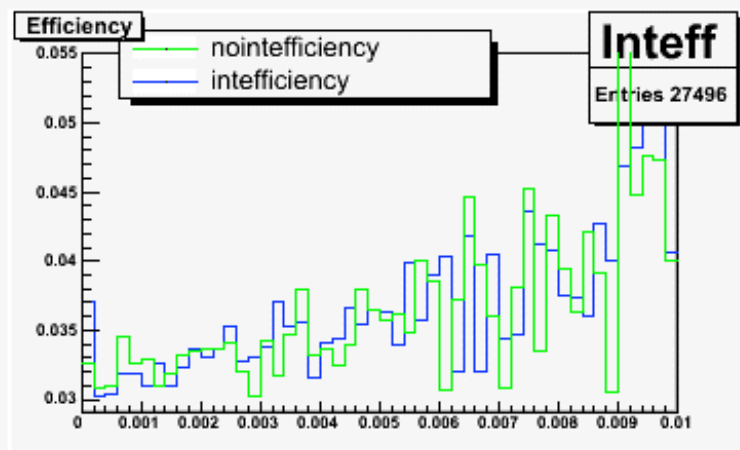
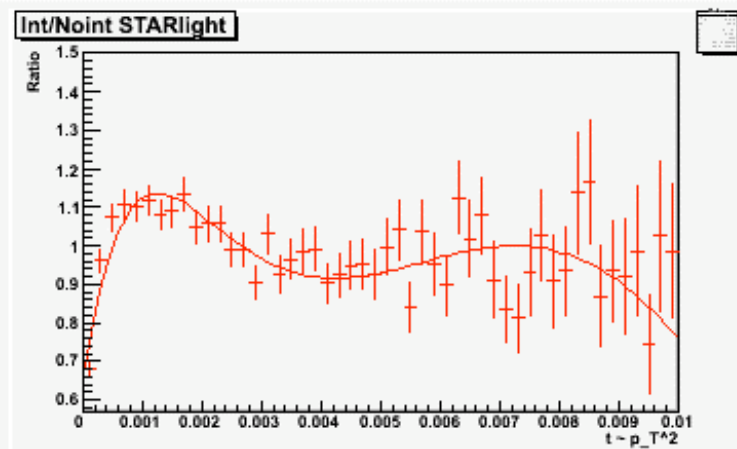
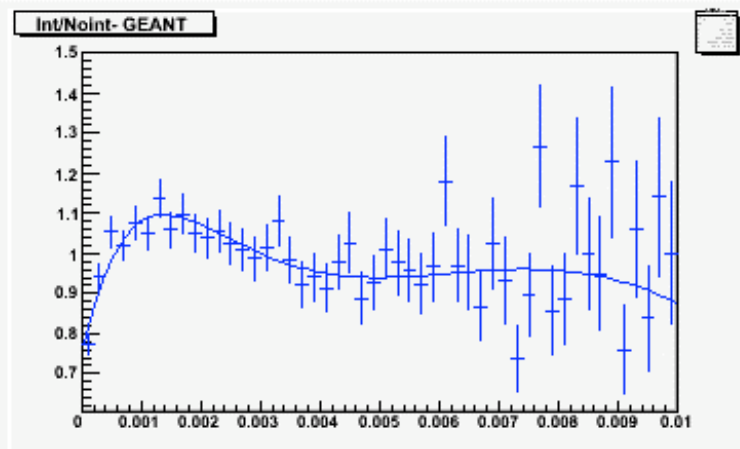
- minbias
- zVertex < 0
- 0.1 < y < 0.5



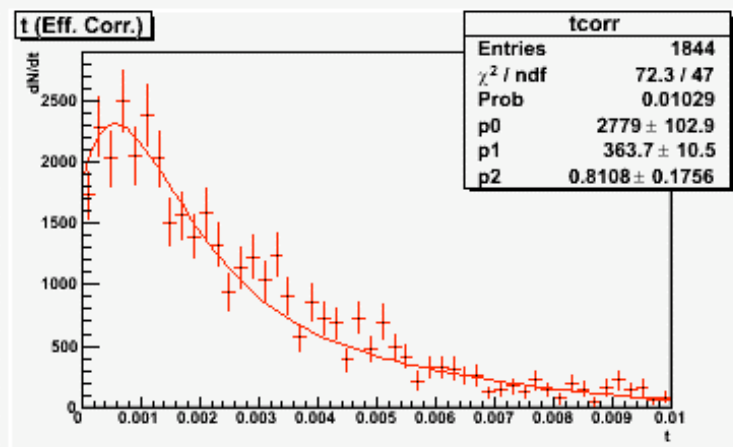
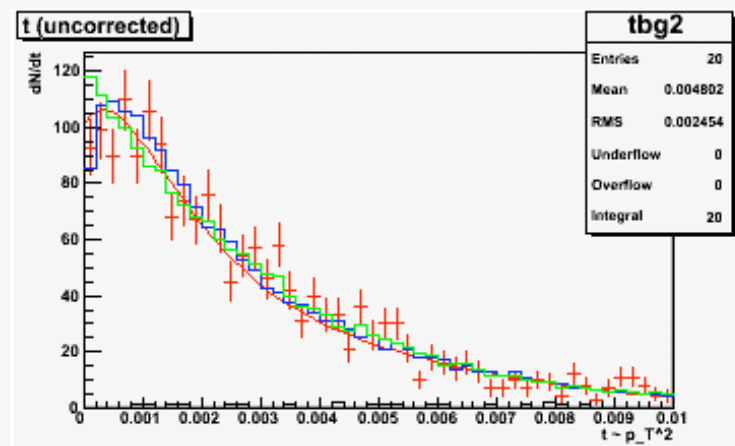
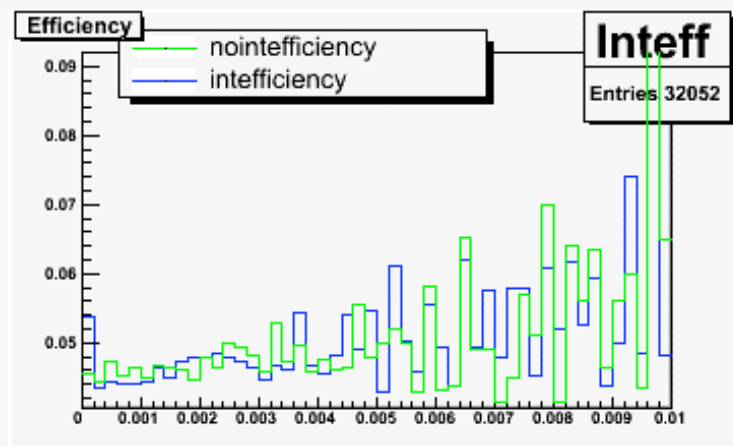
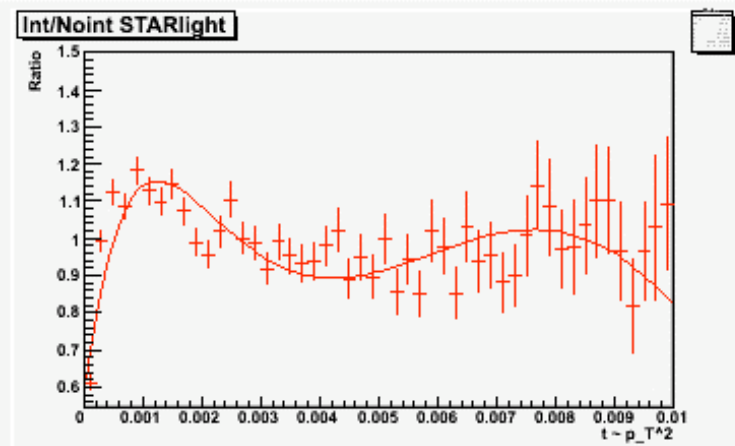
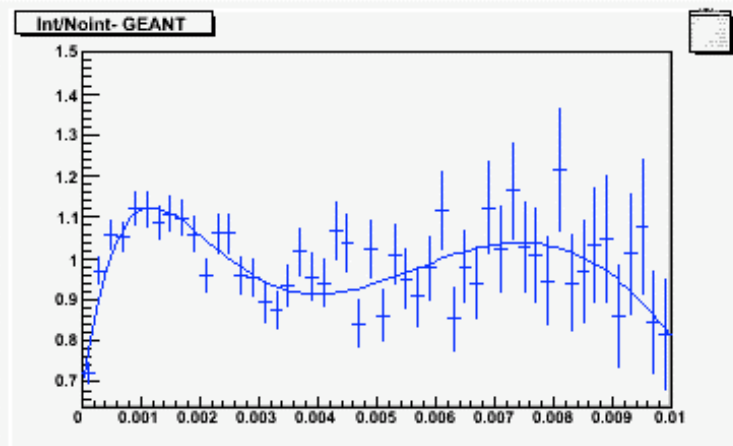
- minbias
- $z_{\text{Vertex}} < 0$
- $0.5 < y < 1.0$



- topology
- $z\text{Vertex} > 0$
- $0.1 < y < 0.5$

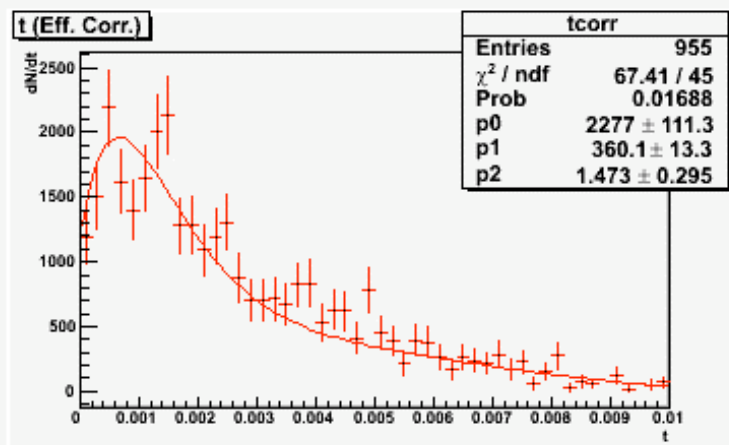
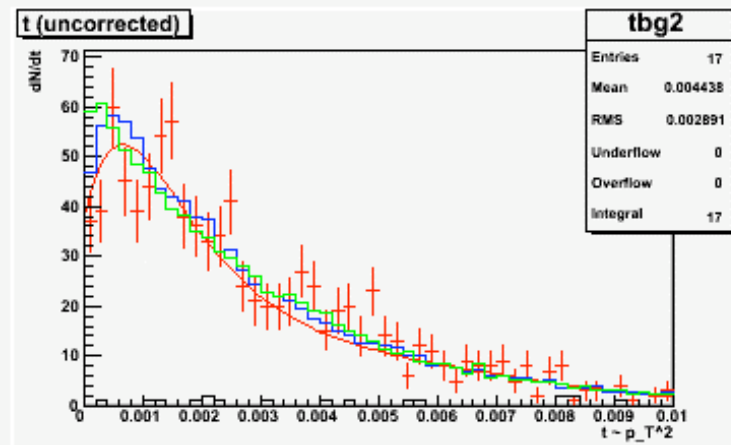
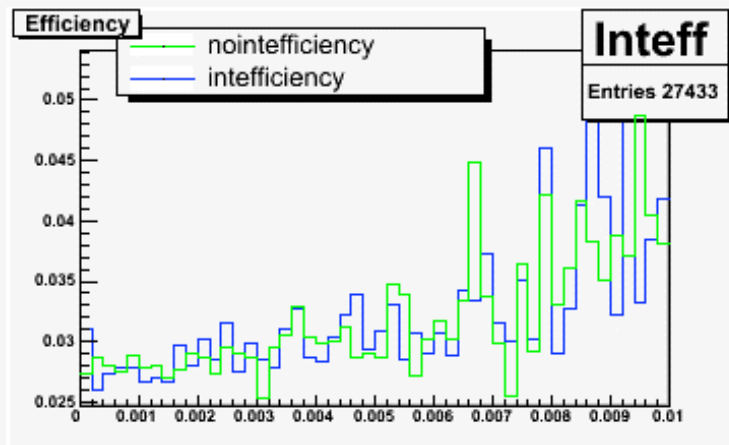
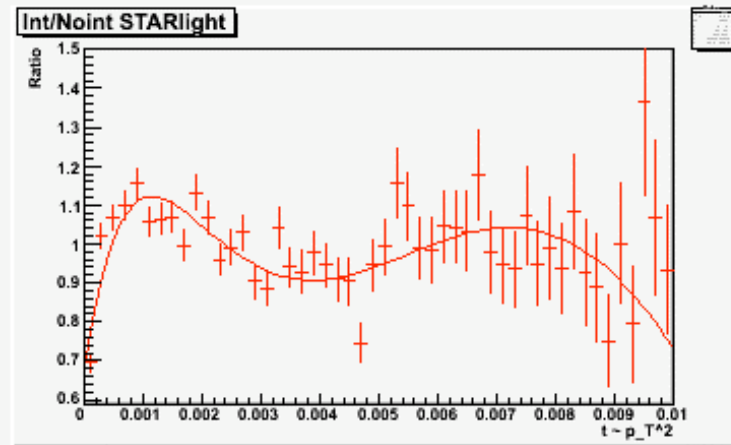
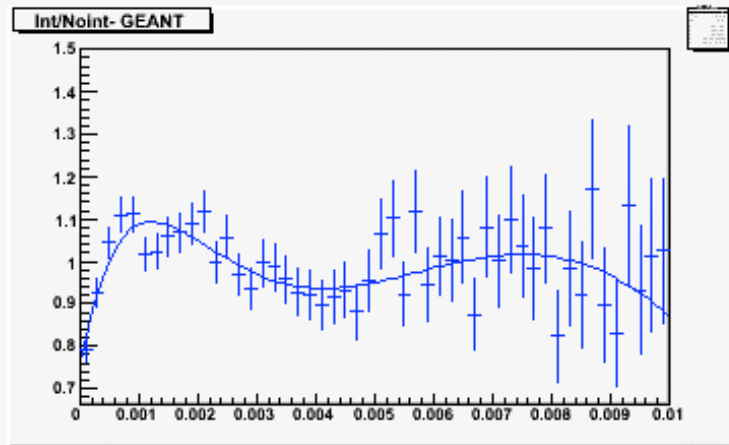


- topology
- $z\text{Vertex} > 0$
- $0.5 < y < 1.0$



- topology
- $z\text{Vertex} < 0$
- $0.1 < y < 0.5$





- topology
- $z\text{Vertex} < 0$
- $0.5 < y < 1.0$

# zVertex Summary

	c	$\chi^2/\text{dof}$
Minbias		
z > 0 0.1 < y < 0.5	0.97±0.10	71/47
0.5 < y < 1.0	0.77±0.14	76/47
z < 0 0.1 < y < 0.5	0.89±0.10	63/47
0.5 < y < 1.0	0.80±0.13	66/47
Topology		
z > 0 0.1 < y < 0.5	1.04±0.17	81/47
0.5 < y < 1.0	1.38±0.26	72/47
z < 0 0.1 < y < 0.5	0.81±0.18	72/47
0.5 < y < 1.0	1.47±0.30	67/45