

# Relative scales

Region	$R_0$	$\delta R_0$
Combined muons		
Endcap-A	100.23%	0.08%
Barrel	100.12%	0.09%
Endcap-C	100.94%	0.08%
MS muons		
Endcap-A	100.52%	0.10%
Barrel	100.10%	0.08%
Endcap-C	99.22%	0.10%
ID muons		
Endcap-A	100.64%	0.11%
Barrel	100.27%	0.06%
Endcap-C	101.21%	0.08%

Table 1: STACO: relative scales with Release-16

Region	$R_0$	$\delta R_0$
Combined muons		
Endcap-A	99.16%	0.08%
Barrel	100.09%	-0.00%
Endcap-C	101.08%	0.08%
MS muons		
Endcap-A	99.28%	0.10%
Barrel	100.11%	0.09%
Endcap-C	99.93%	0.09%
ID muons		
Endcap-A	100.26%	0.09%
Barrel	100.14%	0.06%
Endcap-C	100.30%	0.11%

Table 2: STACO: relative scales with Release-17

MS and Combined Endcap-A got worse (correction overshoot?)  
 Everything else got better.

# Absolute scales

Region	$k_+$	$k_-$
Combined muons		
Endcap-A	$100.05 \pm 0.06\%$	$99.82 \pm 0.06\%$
Barrel	$100.03 \pm 0.05\%$	$99.91 \pm 0.05\%$
Endcap-C	$100.41 \pm 0.06\%$	$99.48 \pm 0.06\%$
MS muons		
Endcap-A	$100.07 \pm 0.08\%$	$99.55 \pm 0.08\%$
Barrel	$100.05 \pm 0.05\%$	$99.95 \pm 0.05\%$
Endcap-C	$99.47 \pm 0.08\%$	$100.25 \pm 0.08\%$
ID muons		
Endcap-A	$100.29 \pm 0.08\%$	$99.65 \pm 0.07\%$
Barrel	$100.10 \pm 0.04\%$	$99.83 \pm 0.04\%$
Endcap-C	$100.66 \pm 0.07\%$	$99.46 \pm 0.07\%$

Table 3: STACO: absolute scale factors with Release-16

Region	$k_+$	$k_-$
Combined muons		
Endcap-A	$99.31 \pm 0.05\%$	$100.16 \pm 0.05\%$
Barrel	$99.92 \pm 0.02\%$	$99.83 \pm 0.02\%$
Endcap-C	$100.26 \pm 0.05\%$	$99.18 \pm 0.05\%$
MS muons		
Endcap-A	$99.14 \pm 0.08\%$	$99.86 \pm 0.08\%$
Barrel	$99.83 \pm 0.05\%$	$99.72 \pm 0.05\%$
Endcap-C	$99.46 \pm 0.07\%$	$99.53 \pm 0.07\%$
ID muons		
Endcap-A	$100.14 \pm 0.06\%$	$99.88 \pm 0.06\%$
Barrel	$99.98 \pm 0.04\%$	$99.84 \pm 0.04\%$
Endcap-C	$100.20 \pm 0.07\%$	$99.89 \pm 0.07\%$

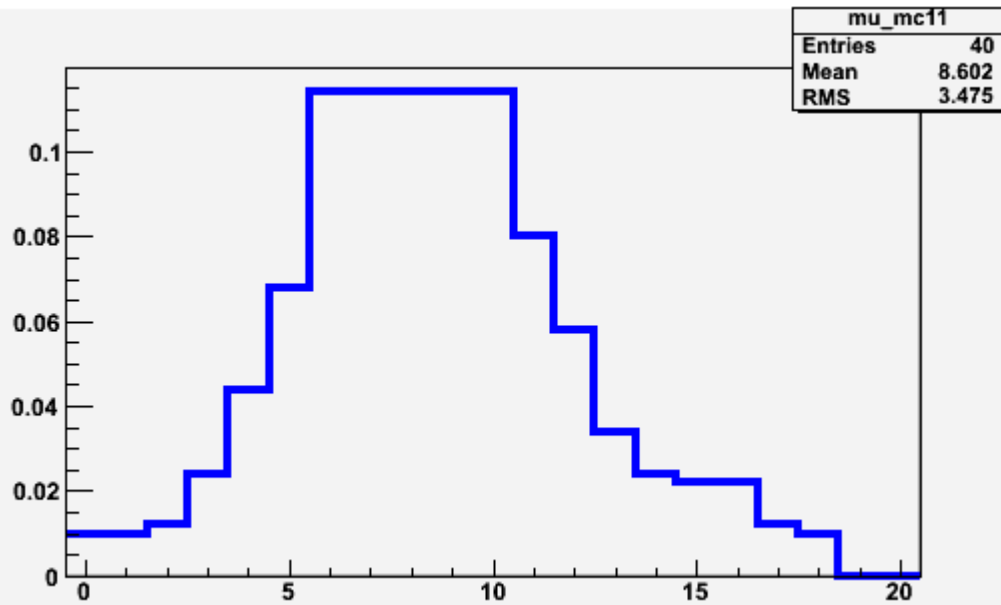
Table 4: STACO: absolute scale factors with Release-17

ID muons got uniformly better.

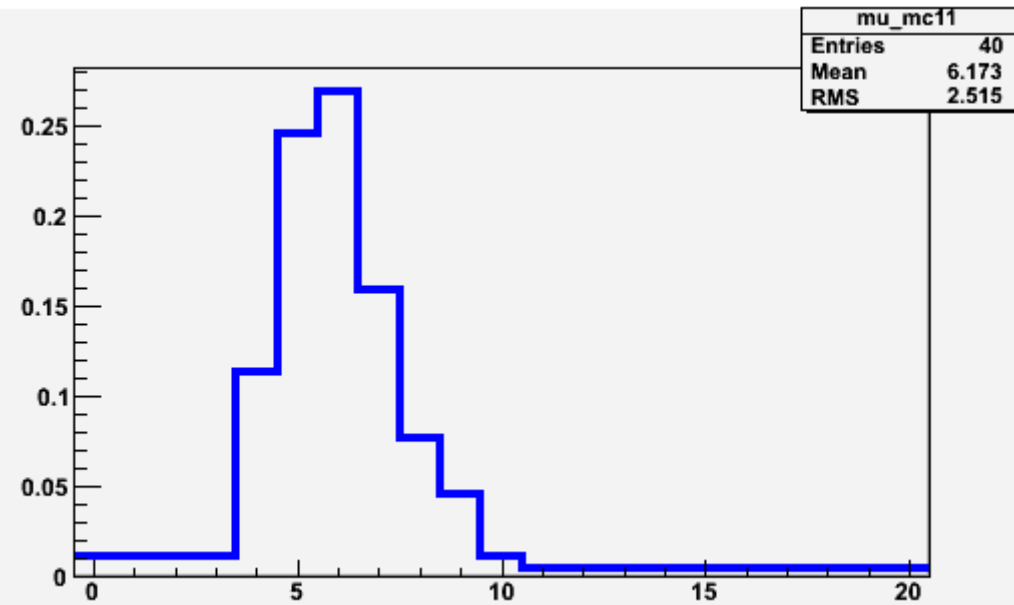
MS muons got worse?

Note: this is using Rel. 17 Z->mumu MC with no pileup correction

mc10b npileup distribution

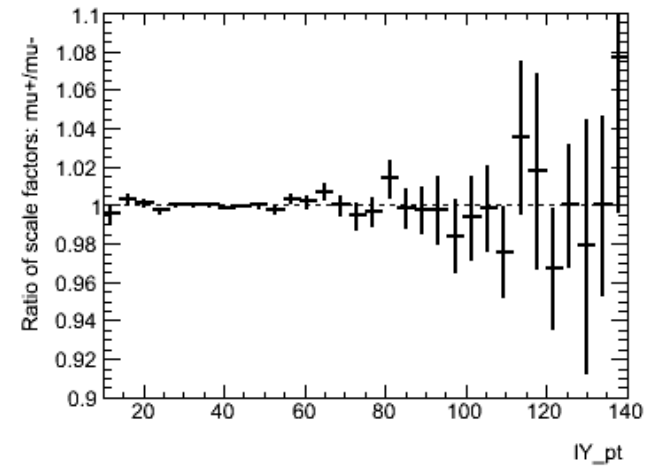
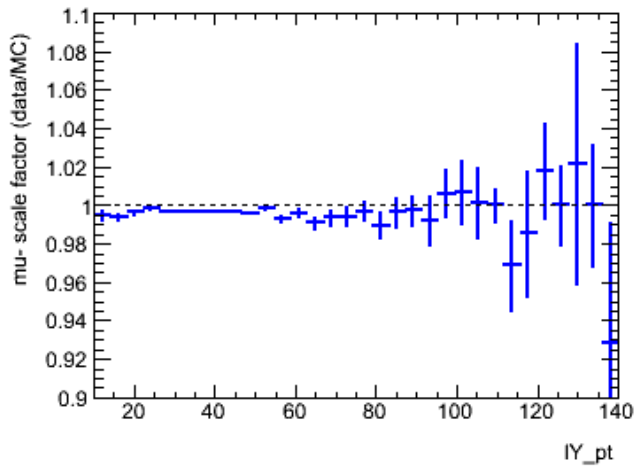
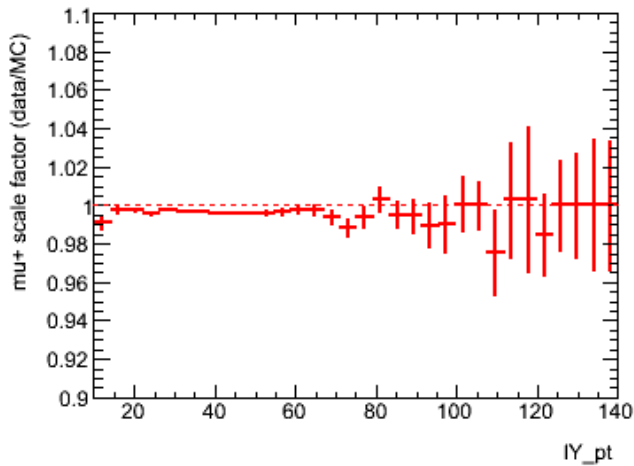
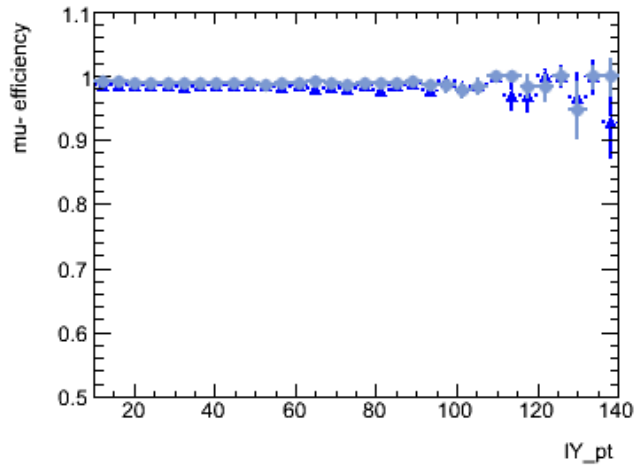
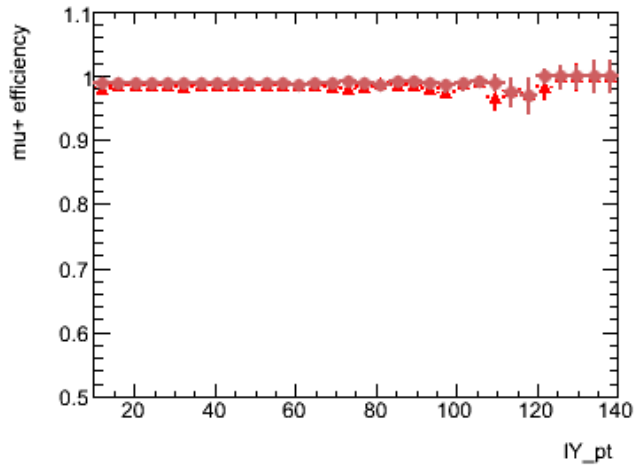


mc11 npileup distribution

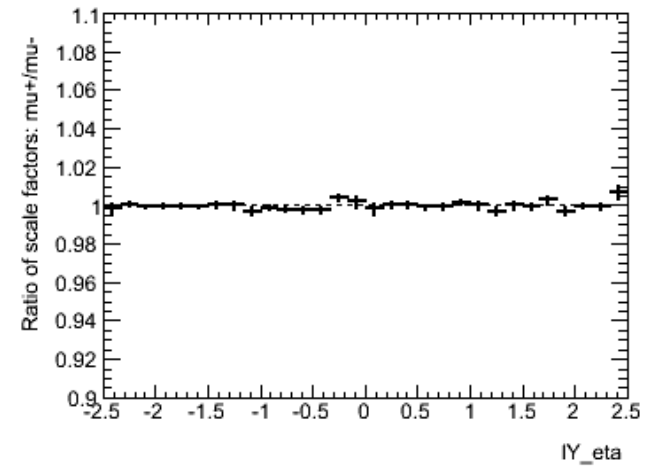
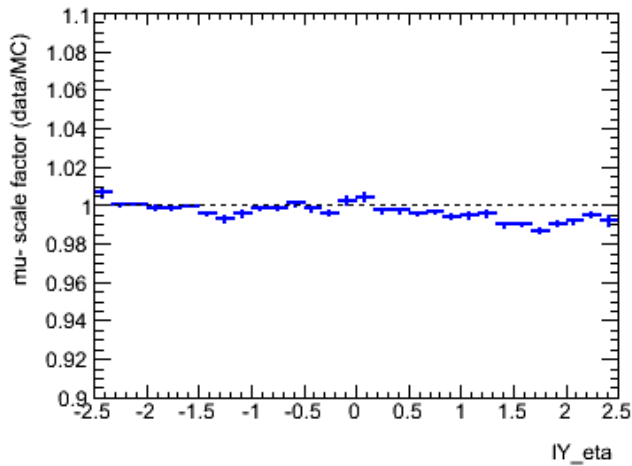
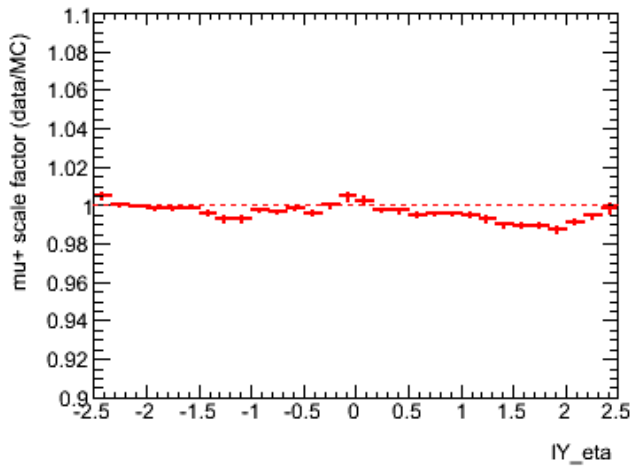
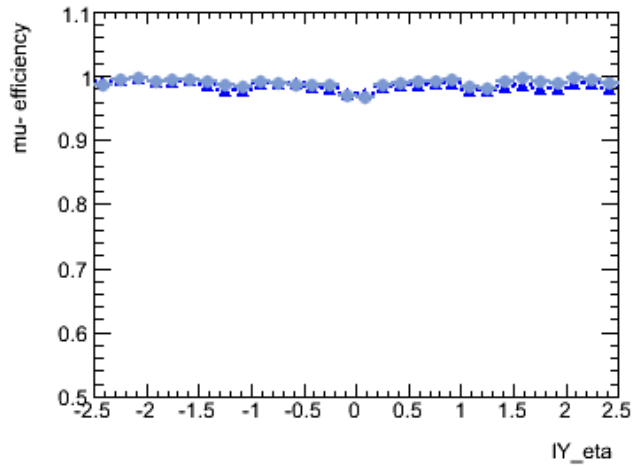
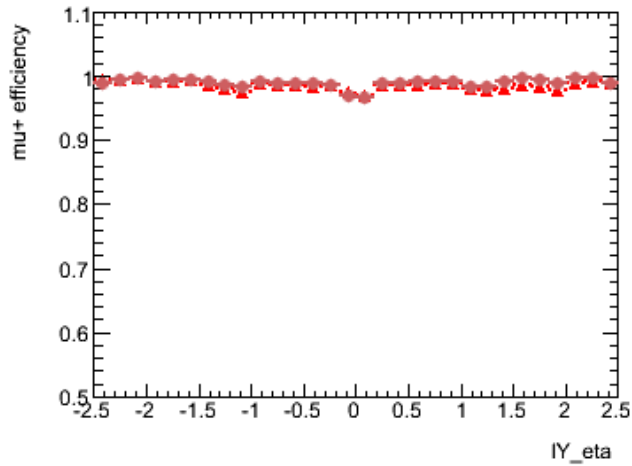


Isolation efficiency plots below do not have BG subtraction  
(because many background aren't available for Rel. 17 yet)

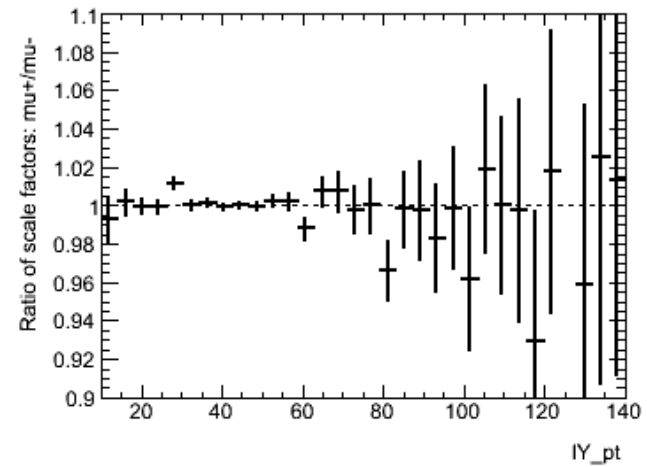
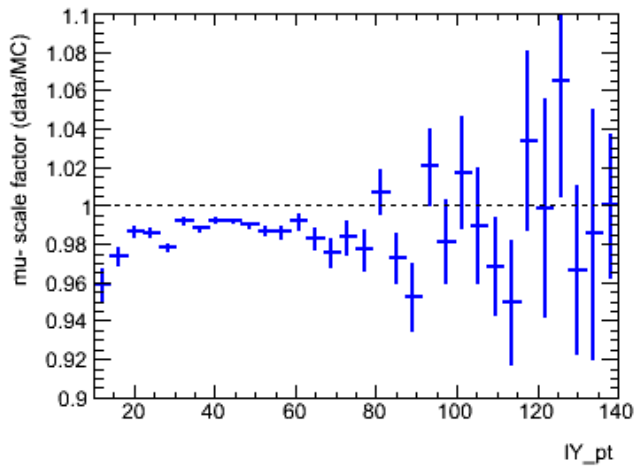
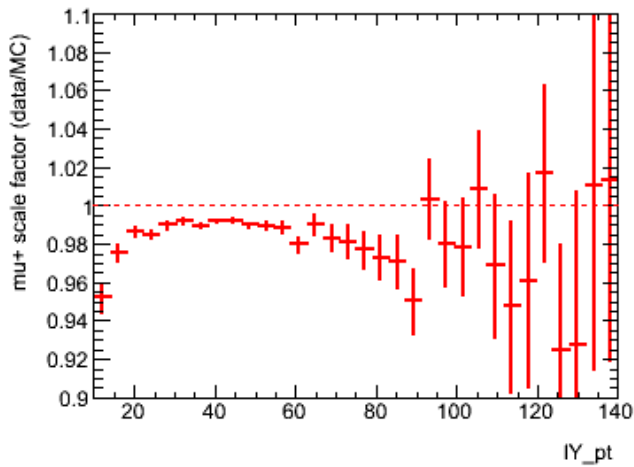
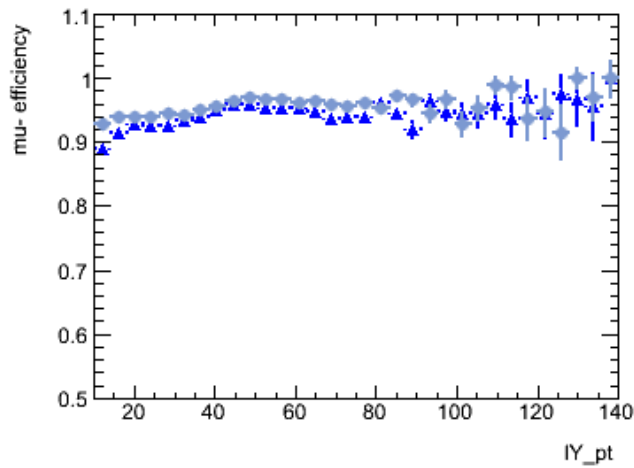
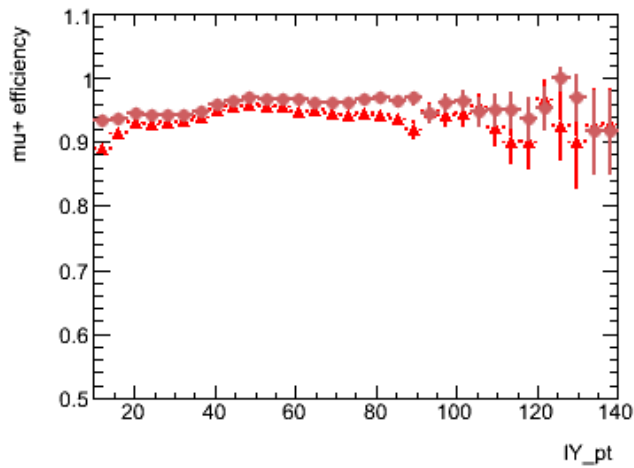
# Rel16 Pythia: MCP hit requirements



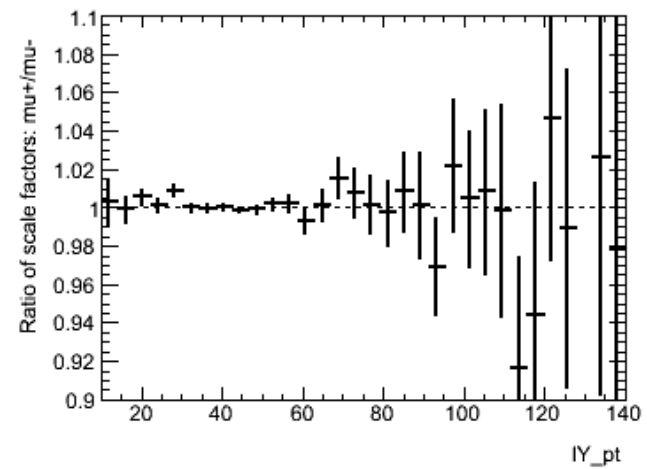
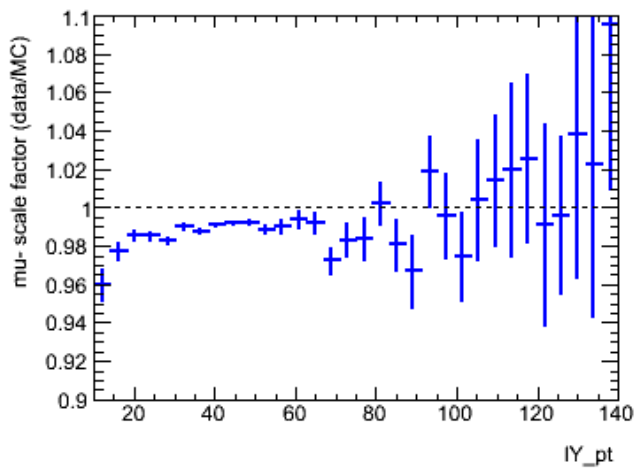
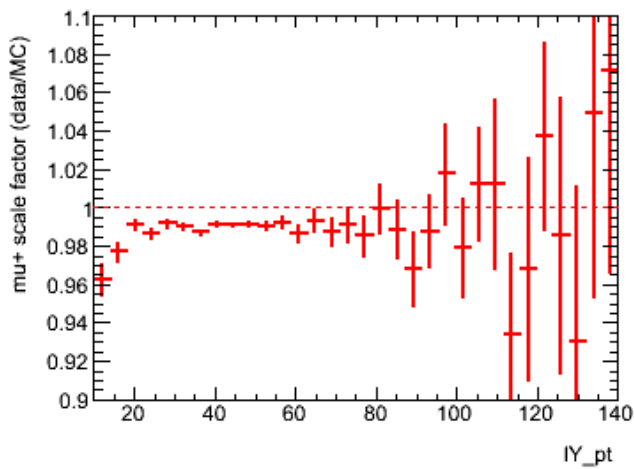
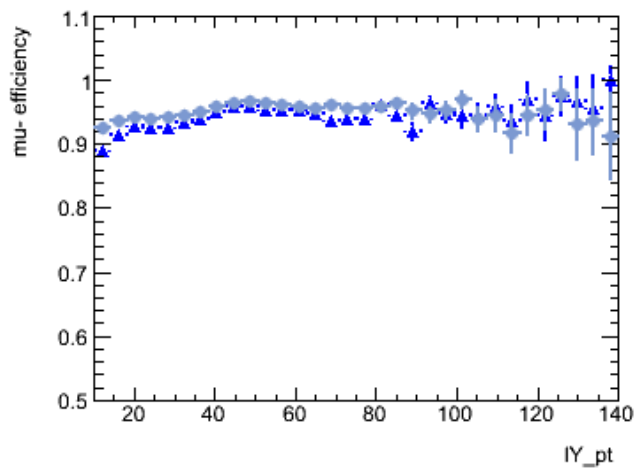
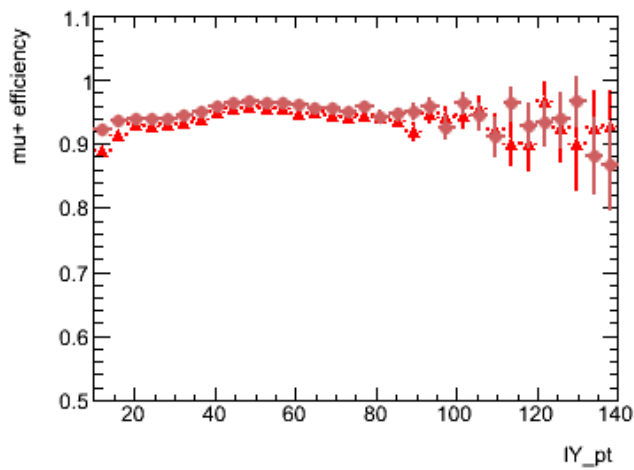
# Rel16 Pythia: MCP hit requirements



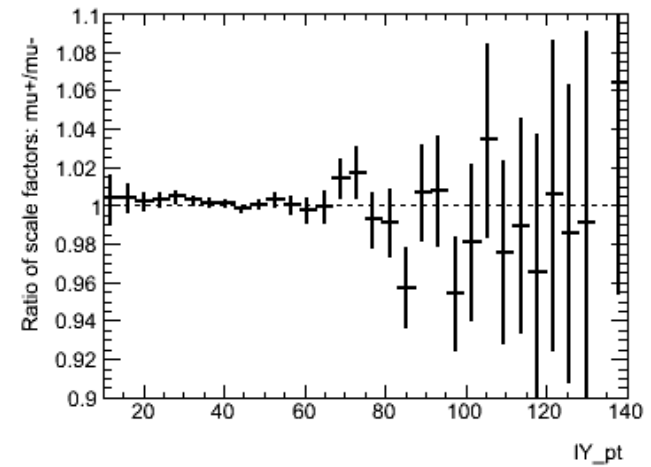
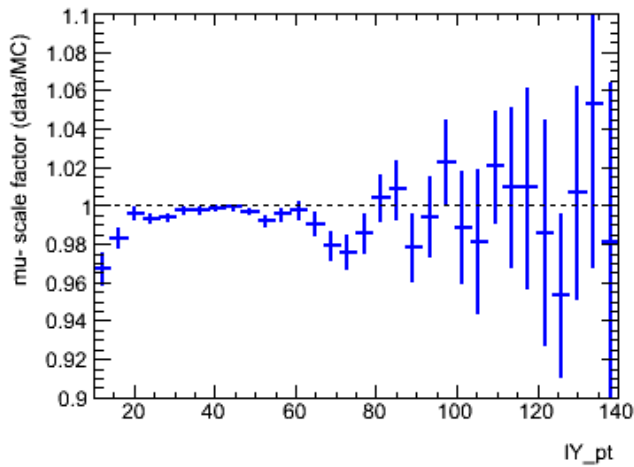
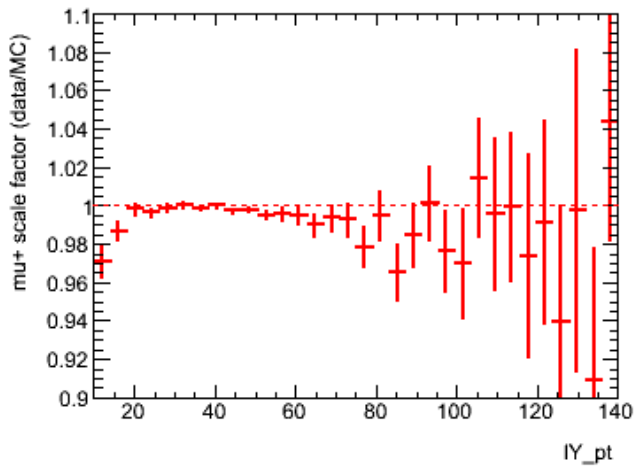
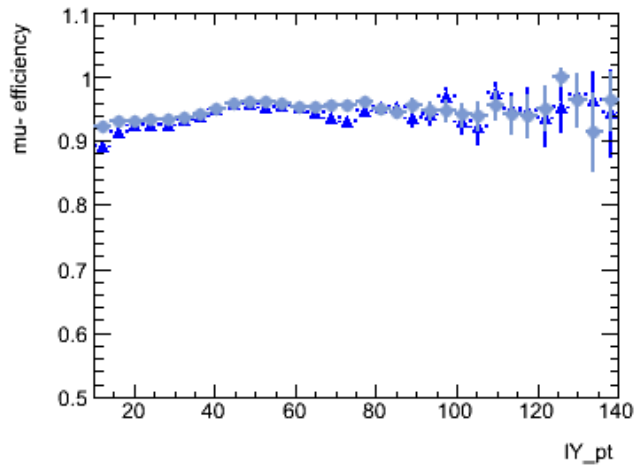
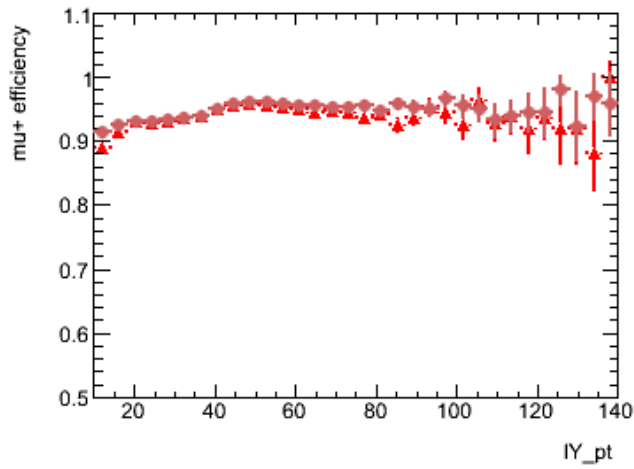
# Rel16, Pythia, ptcone4<2.0



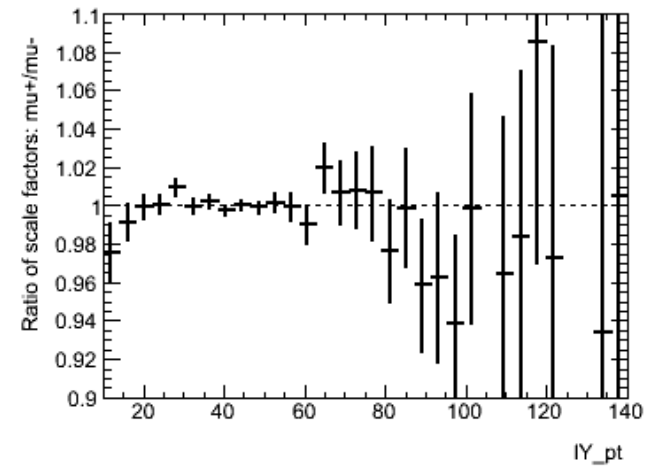
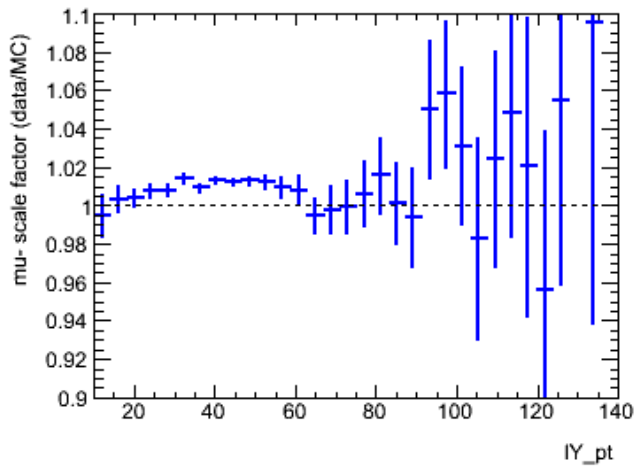
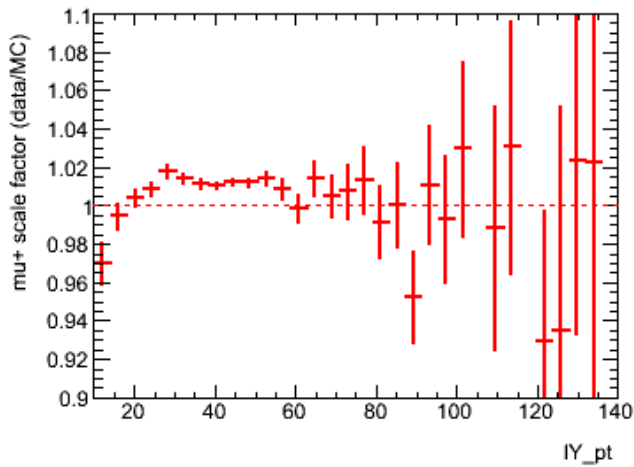
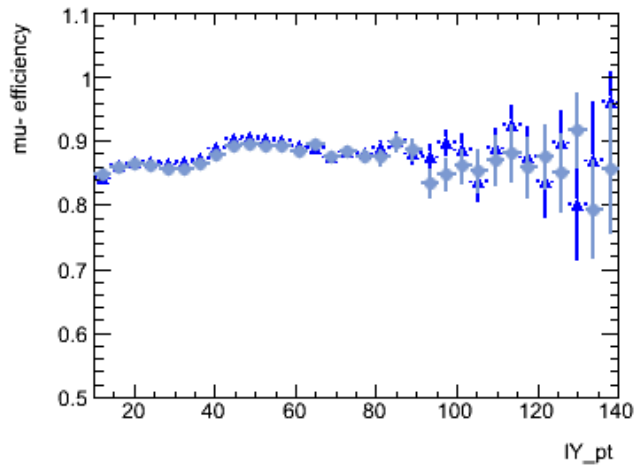
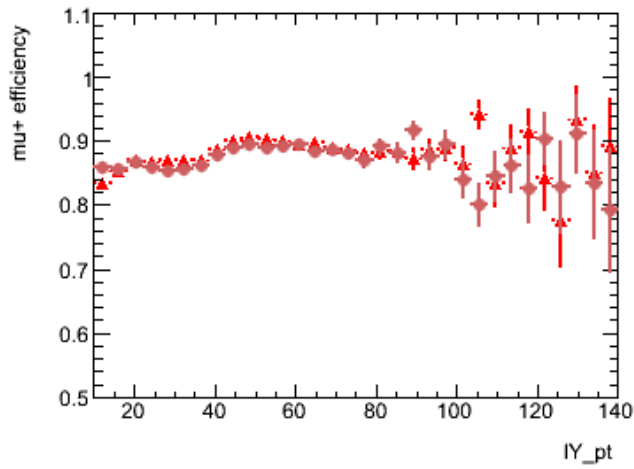
# Rel16, Alpgen, ptcone4<2.0



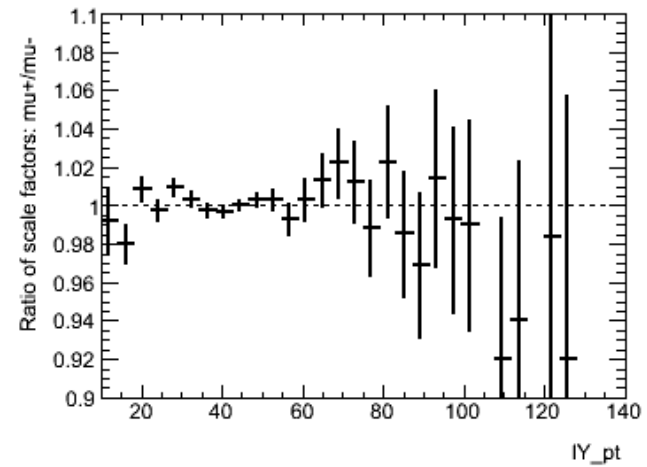
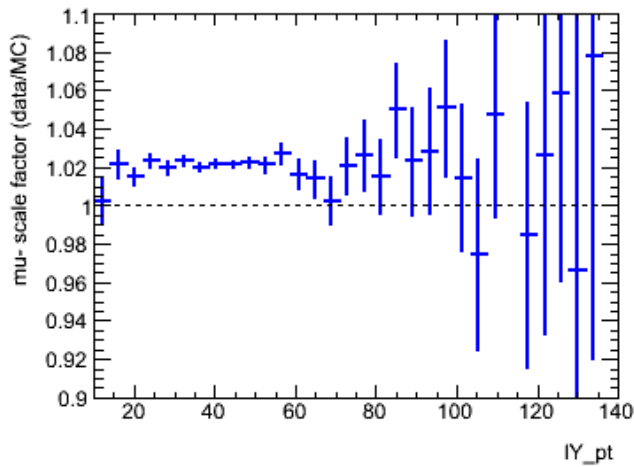
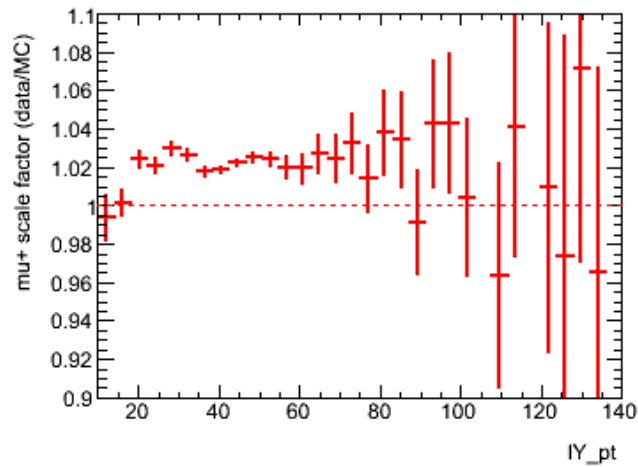
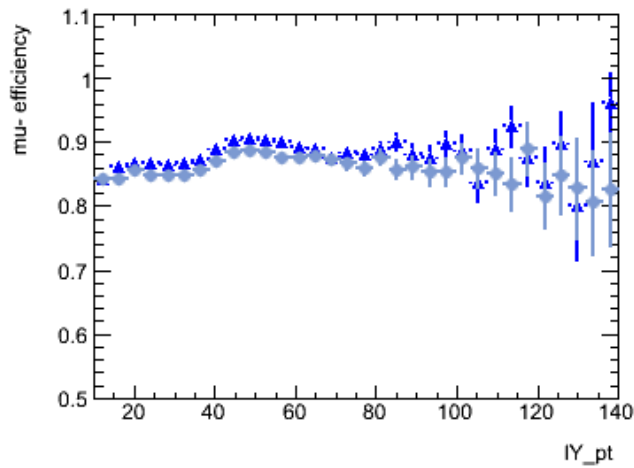
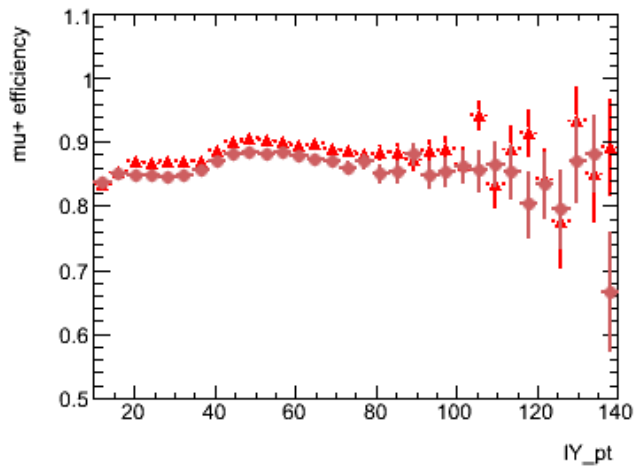
# Rel17, Pythia, ptcone4<2.0



# Rel16, Pythia, etcone4<2.0

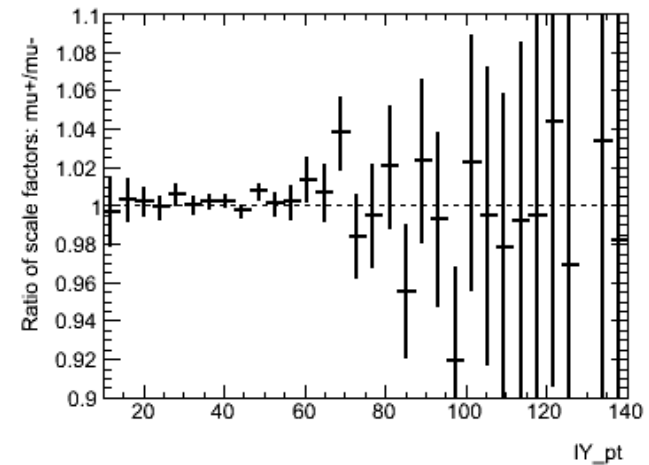
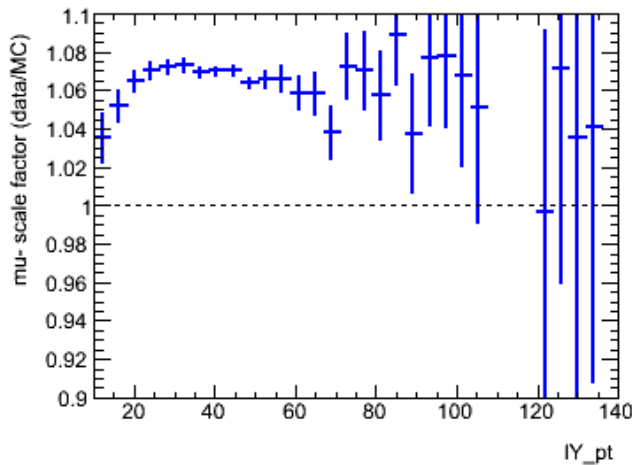
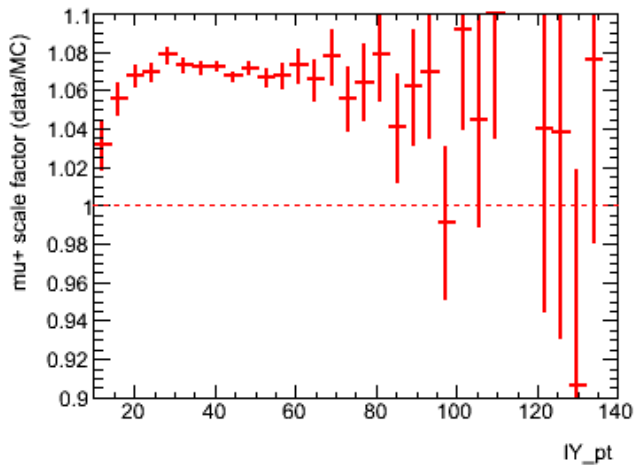
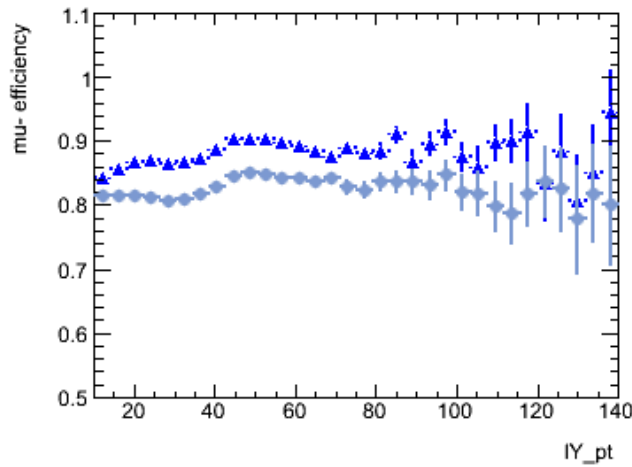
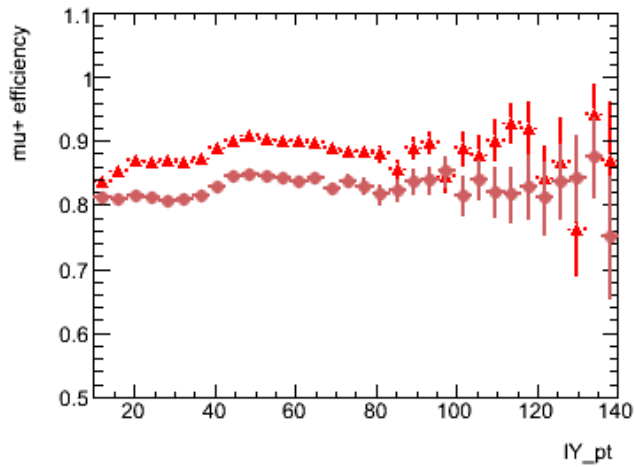


# Rel16, Alpgen, etcone4<2.0



# Rel17, Pythia, etcone4<2.0

## Pileup histo from mc10b (wrong)



# Rel17, Pythia, etcone4<2.0

## Pileup histo from mc11 (right)

