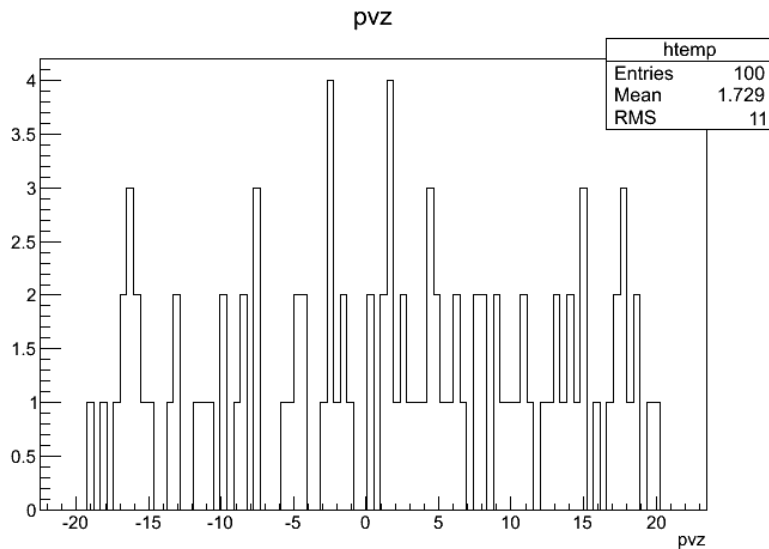
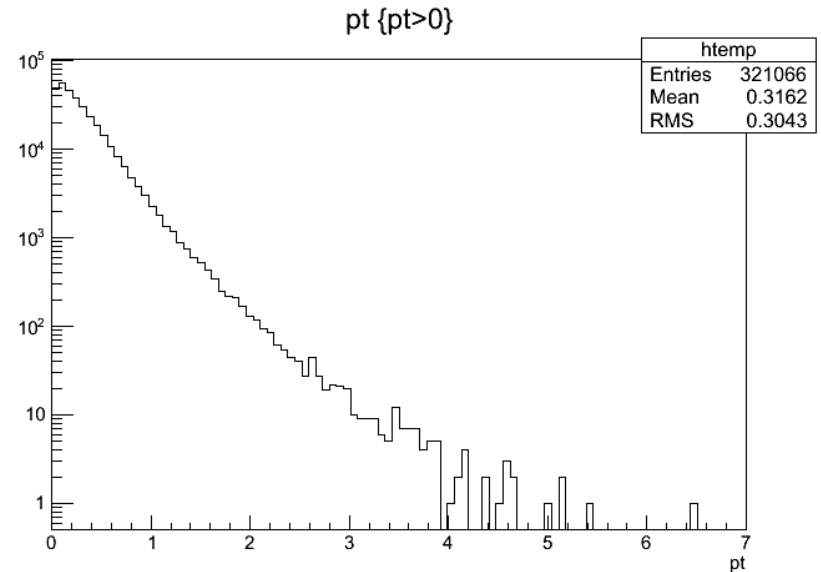
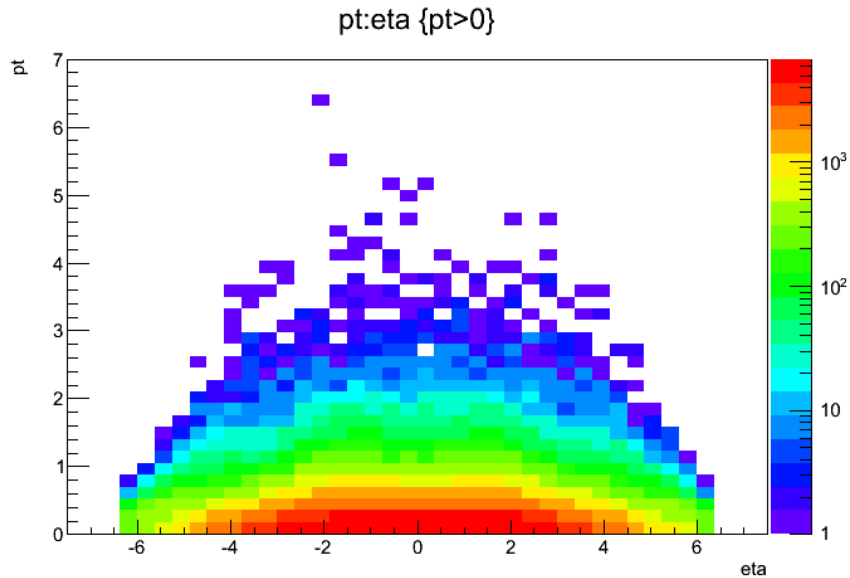


# outline

- Redo simulations with correct pileup file :
  - There was a mistake in the .kumac to generate the MinBias events (wrong Z vertex range)
  - Now the pileup files consist of :

# MinBias events	10	50 (not in these plots)	100	100 (first test)
# hits in inner layer	329	1658	3510	4900
#hits in outer layer	102	488	1028	1900

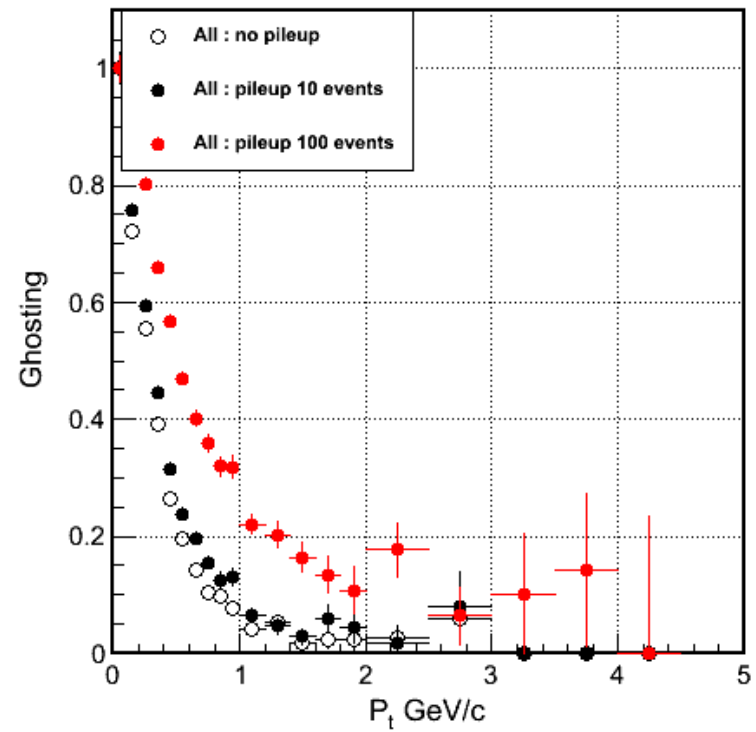
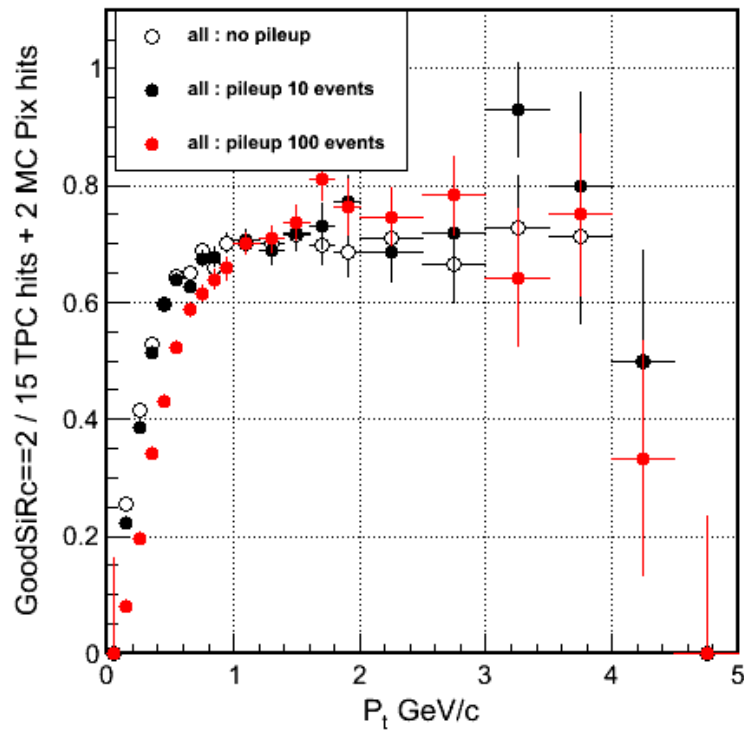
# Checking the pileup



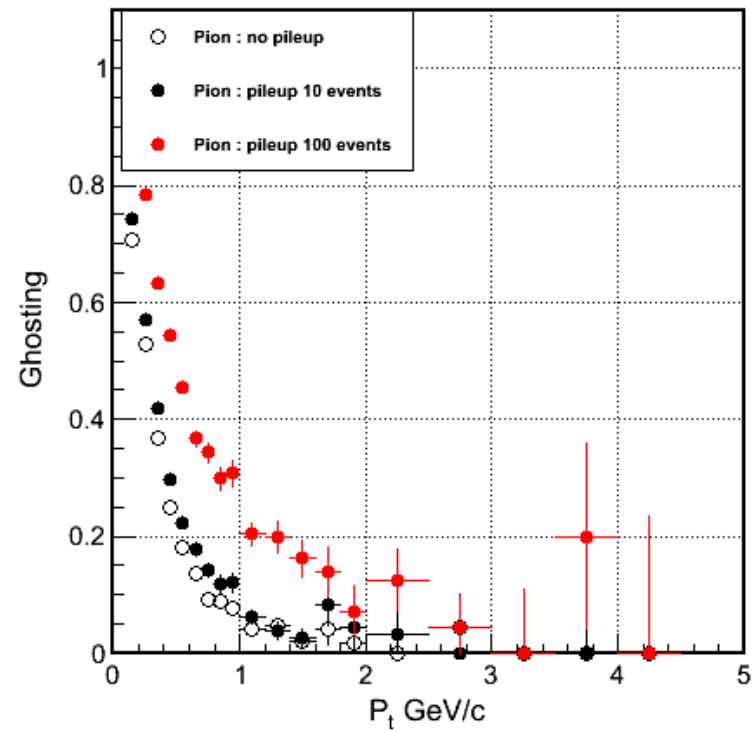
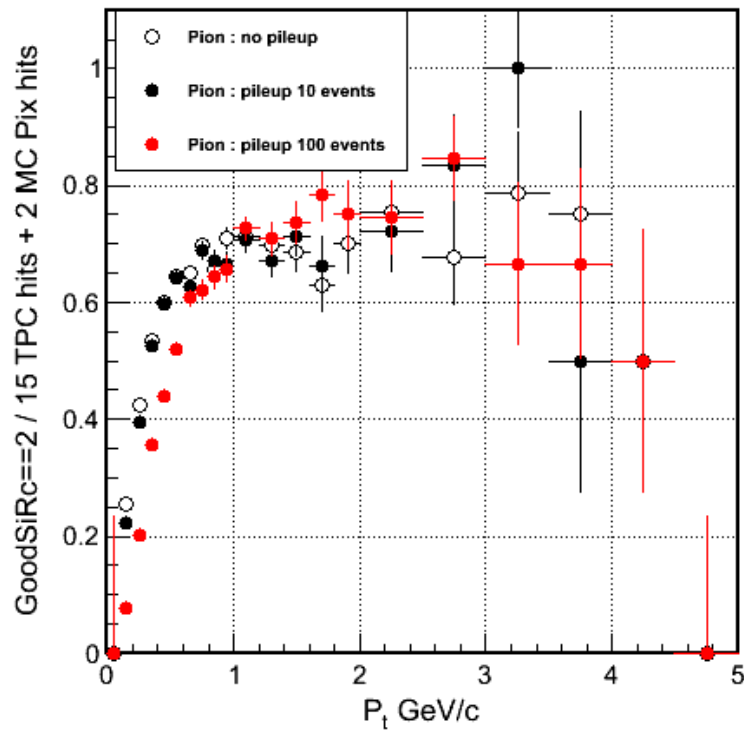
events are generated :

- 1)  $0 < b < 20$  fm : impact parameter
- 2)  $0 < Pt < 100$  GeV/c : transverse momentum
- 3)  $-20 < Z_{\text{vertex}} < 20$  cm : vertex position
- 4)  $\sigma_{xy} = 0.01$  ;  $\sigma_z = 20$  cm : vertex distribution (beam diamond)

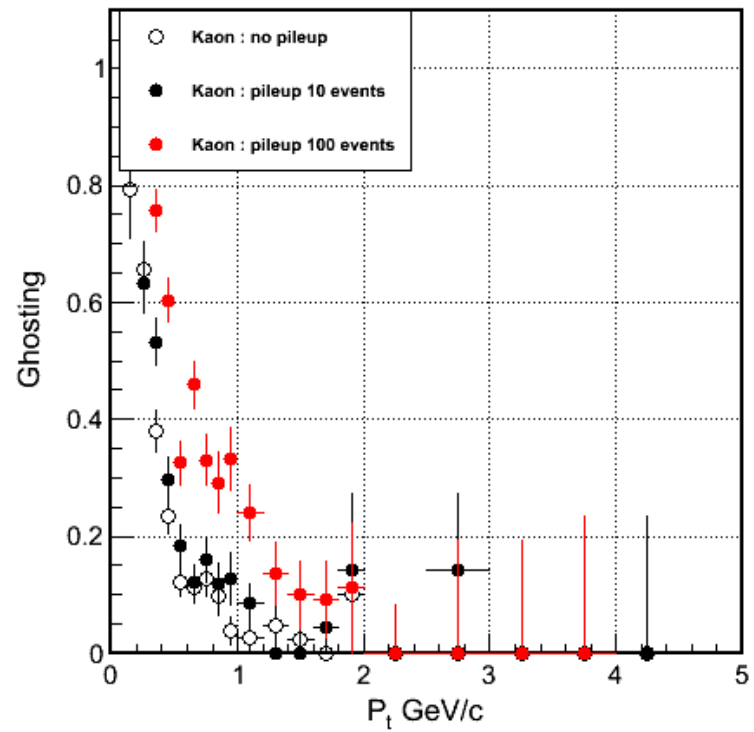
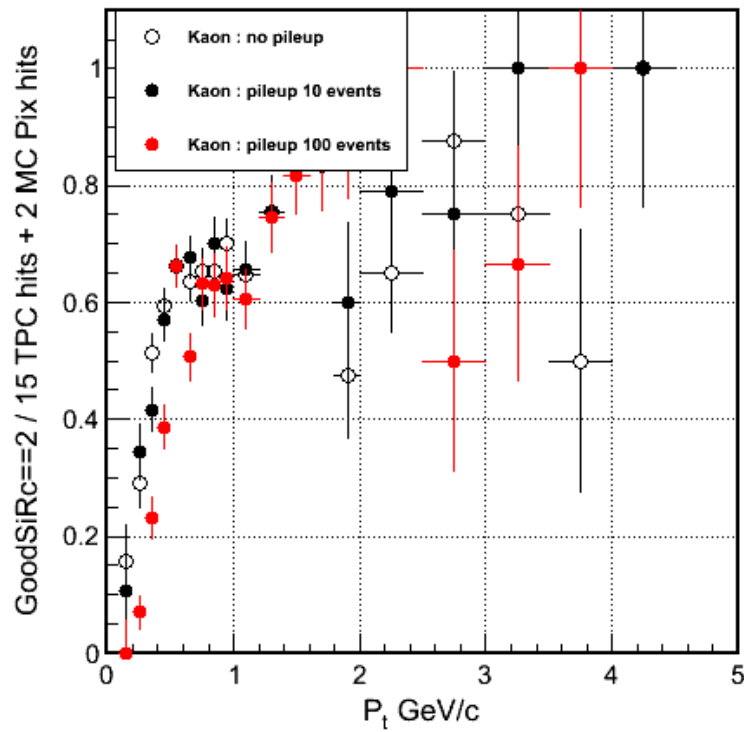
# All particles



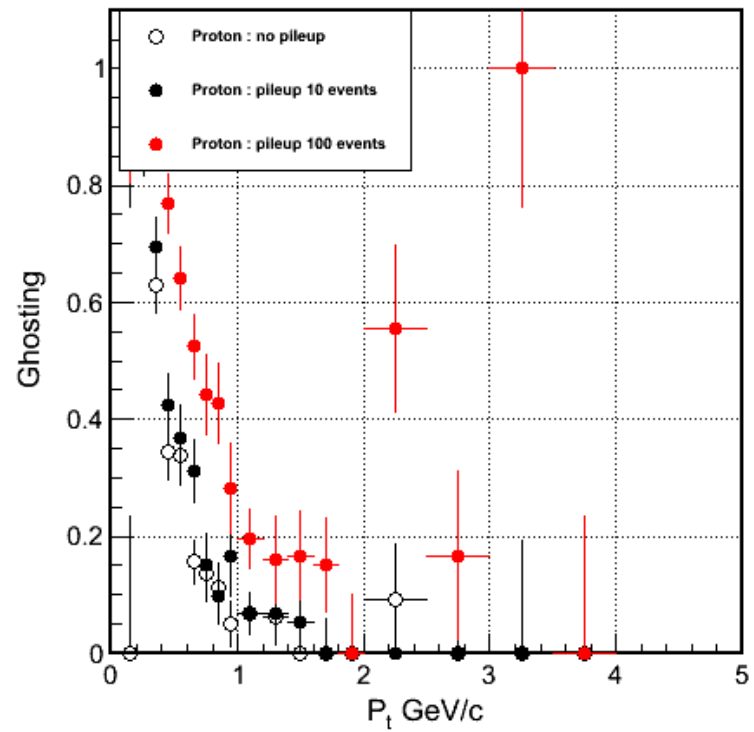
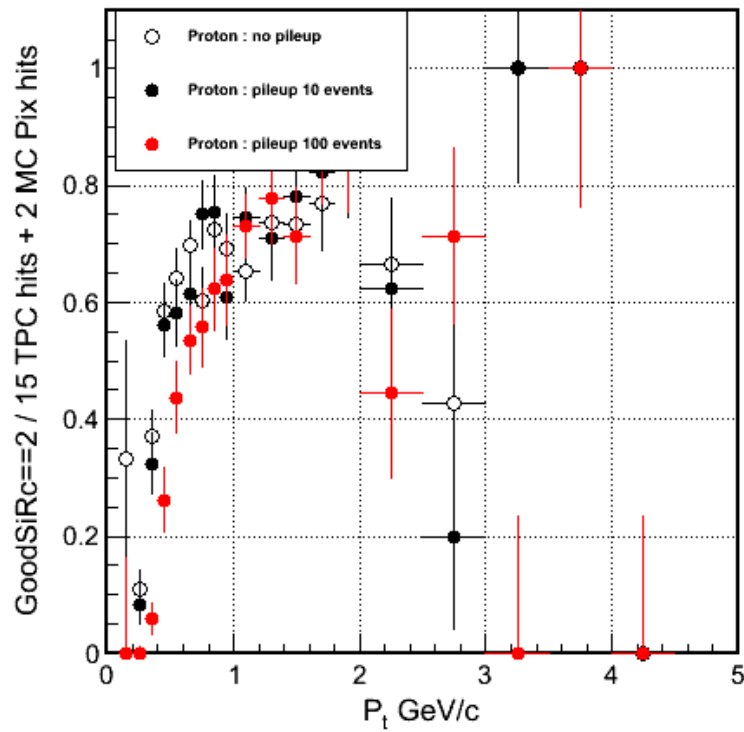
# pions



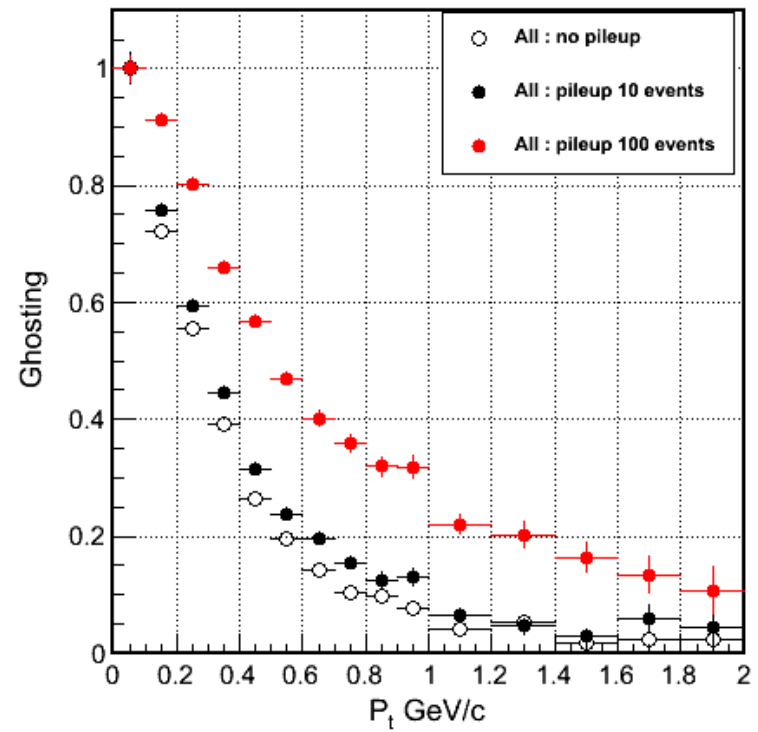
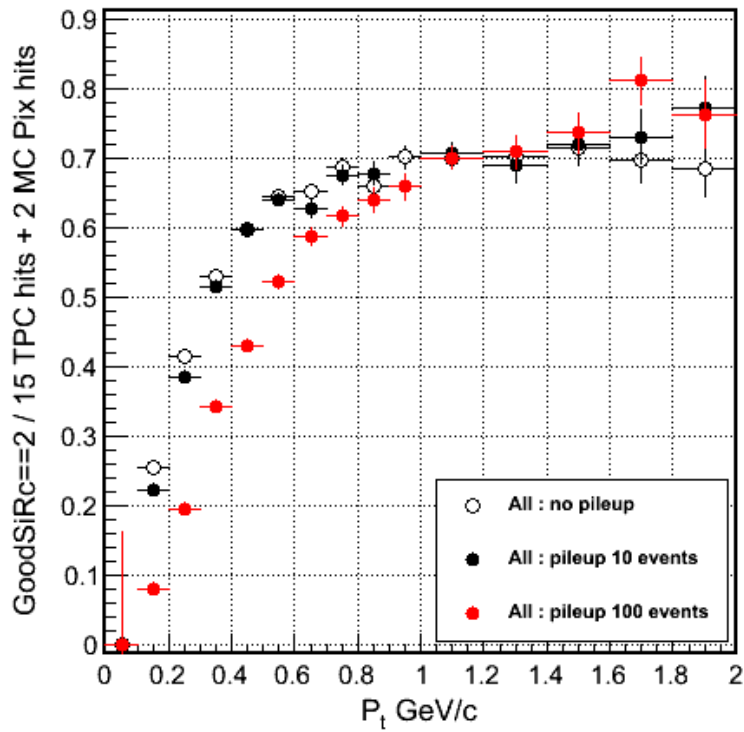
# kaons



# protons



# All particles (zoom)



# comments

- The correct kumac for MinBias events gives less hits in the pixel layers than my first test :
  - Before for 100 MinBias events it added 4900(1900) hits in the inner(outer) layer
- Results with pileup = 100 MinBias give same conclusion :
  - Efficiency does not “suffer” from pileup but ghosting strongly depends on it
- Pileup with 10 MinBias events also shows the same trend but less pronounced .