

# Flow analysis using MRS/FS

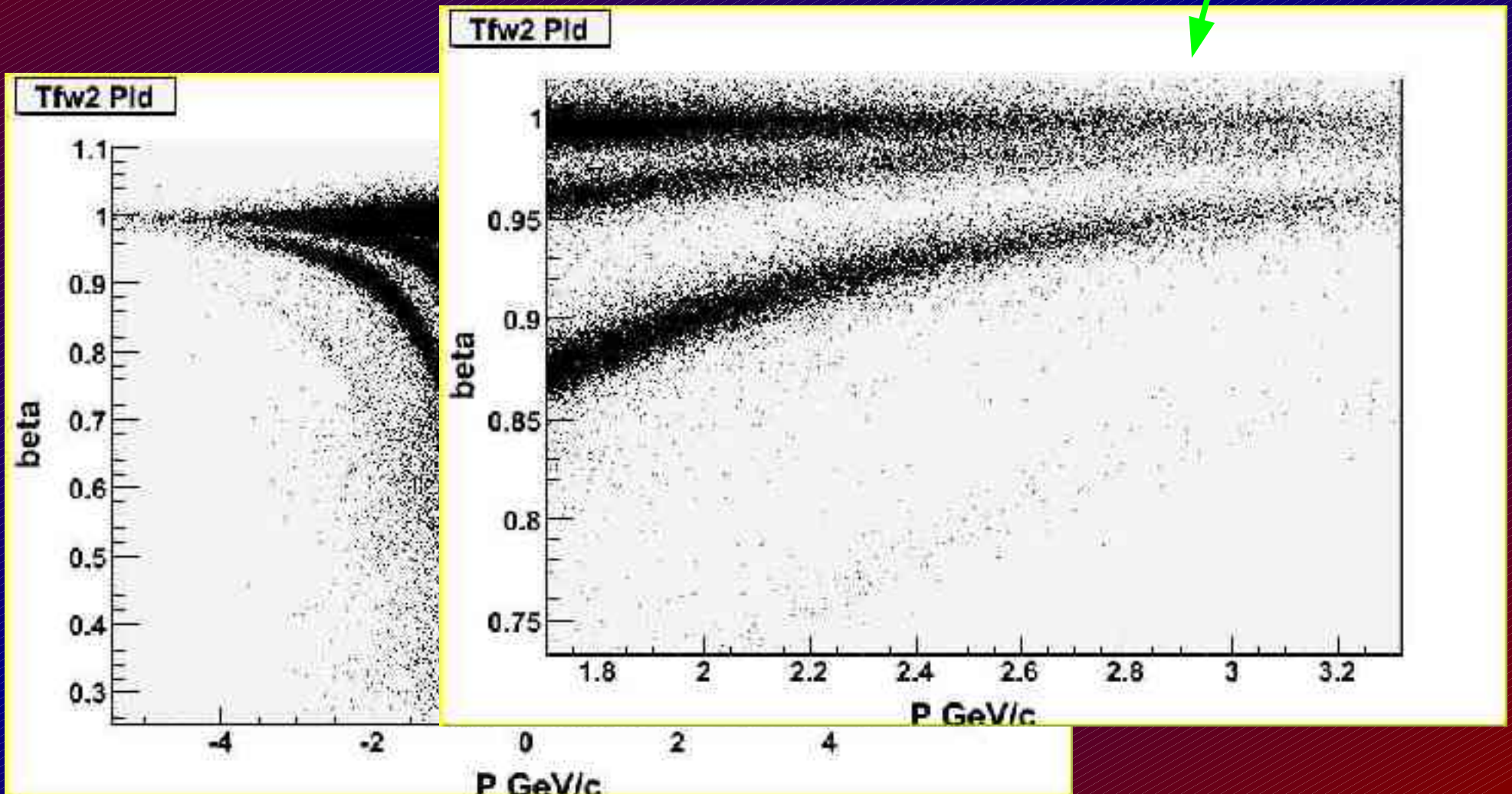
H. Ito

- 4 separate angles: 4, 8(not quite done), 40 and 90 deg
- Pion and hopefully Proton (will not be shown)

# TFW2 PID

TFW2 is used for PID in MRS

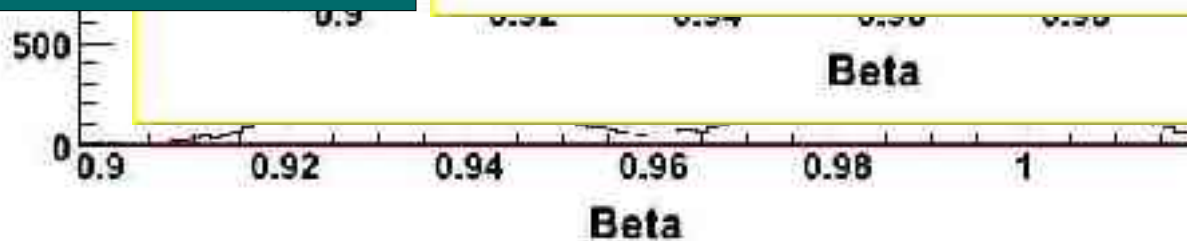
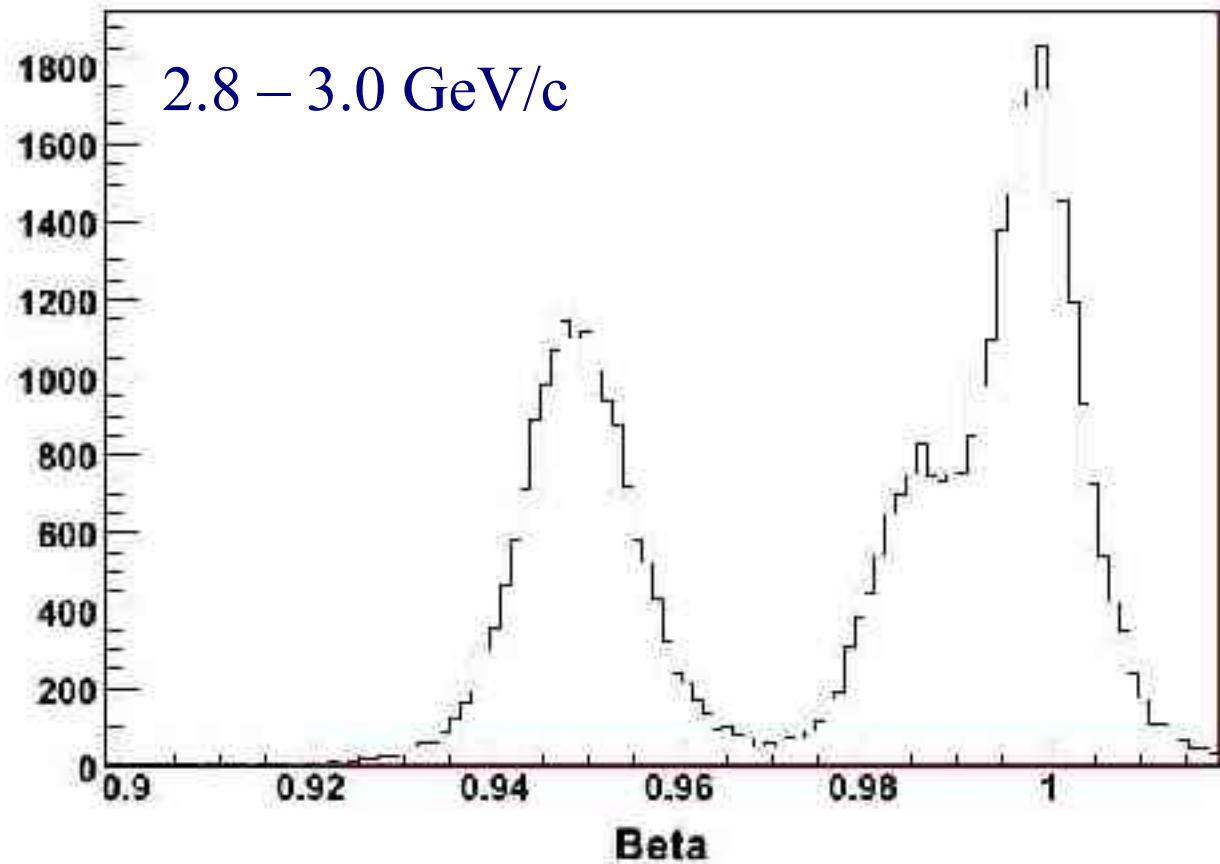
Looks good upto here?



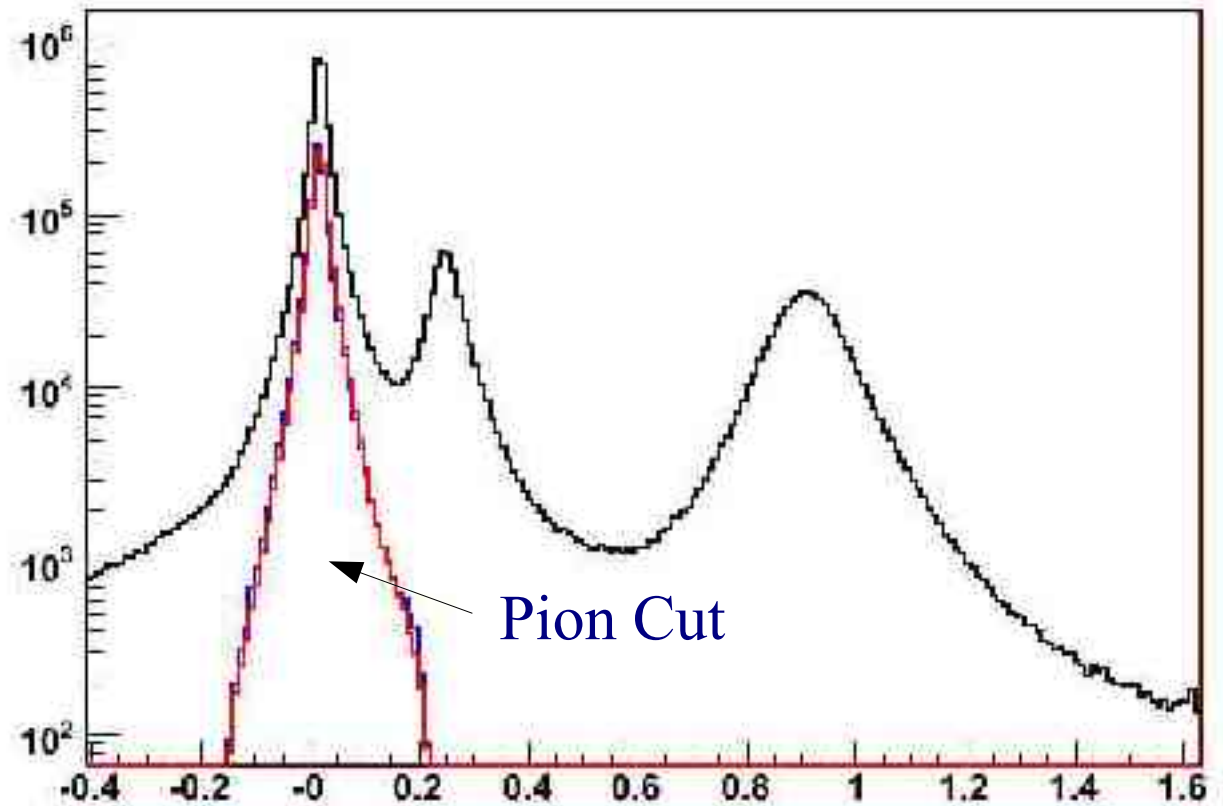
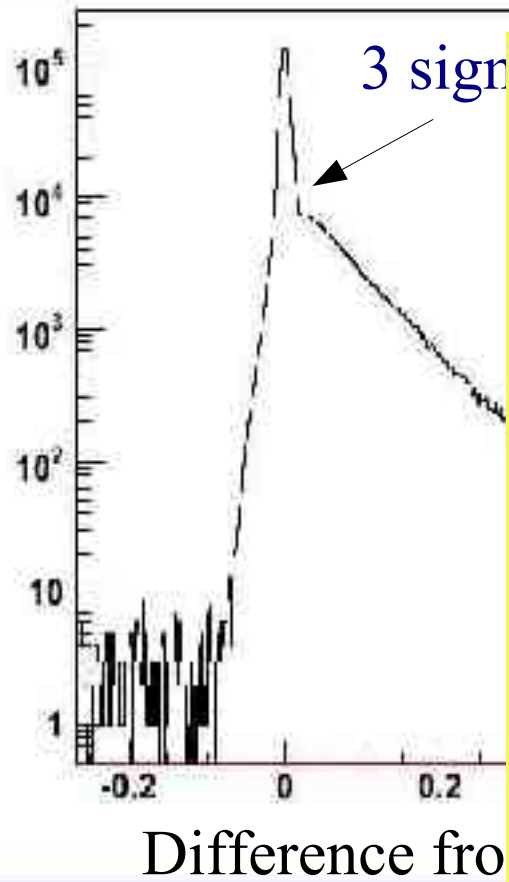


# TFW2 Pi-K separation at 90 deg

Would C4 help?  
What is the  
rejection (or  
contamination)  
factor of C4?

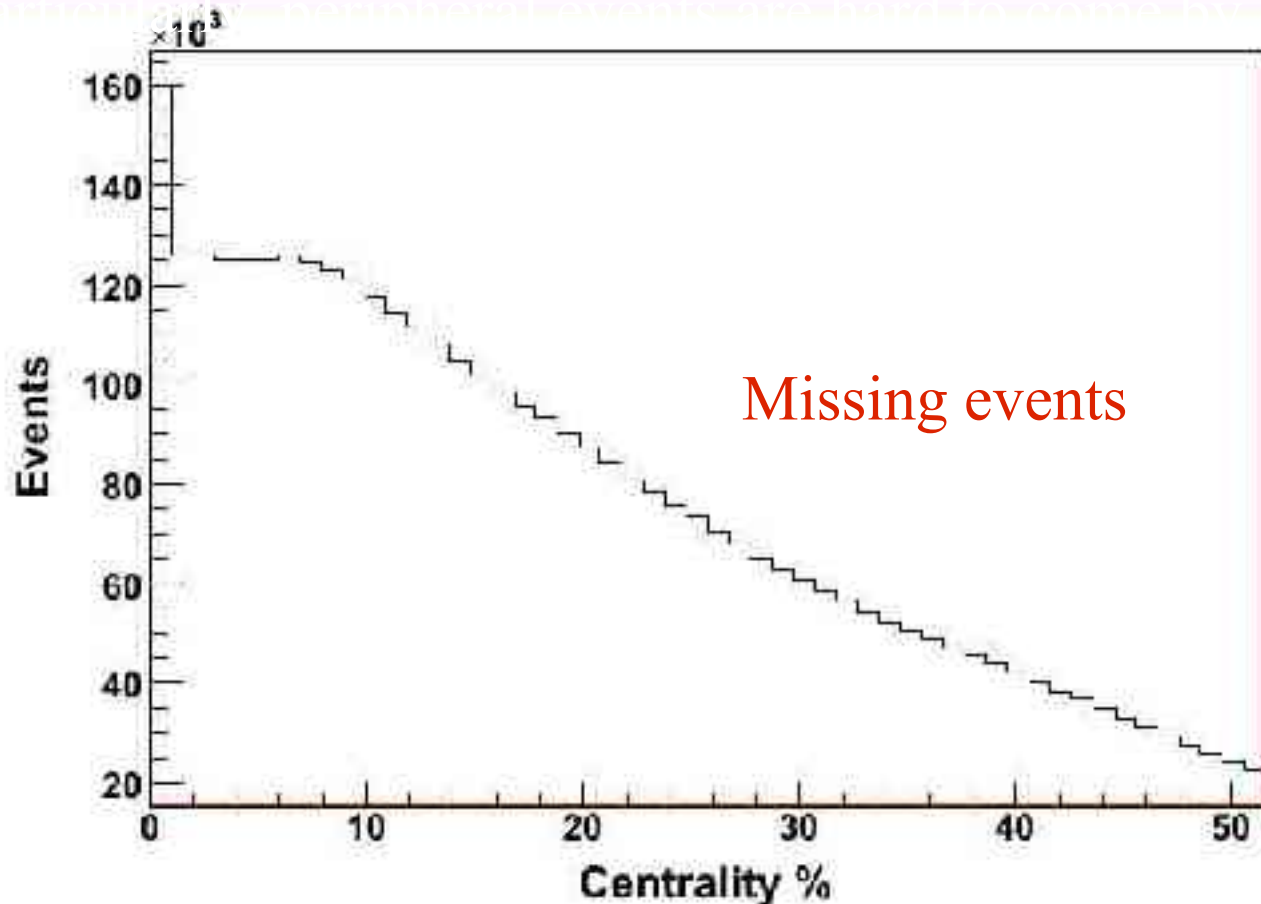


# Pion selection in MRS by TFW2



# Centrality 0-50%?

Spectrometer trigger tends to select more central events.  
Dividing events in smaller centrality range is ideal. But, there may not be enough events to divide.



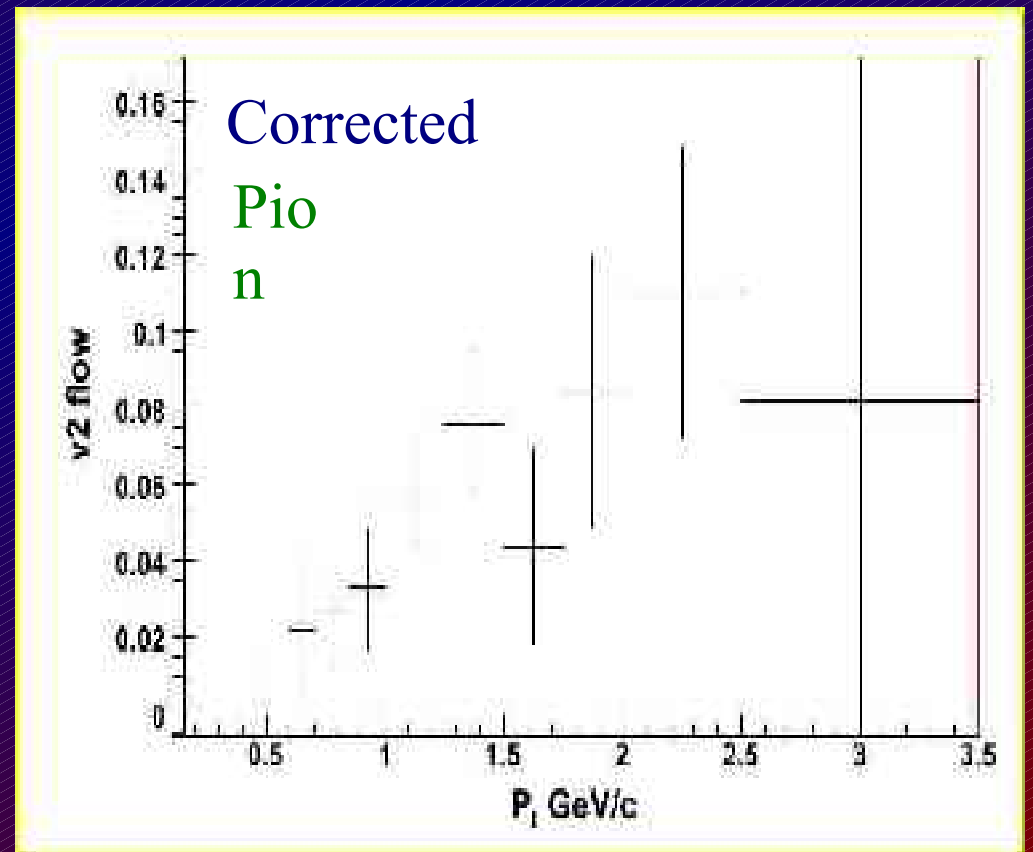
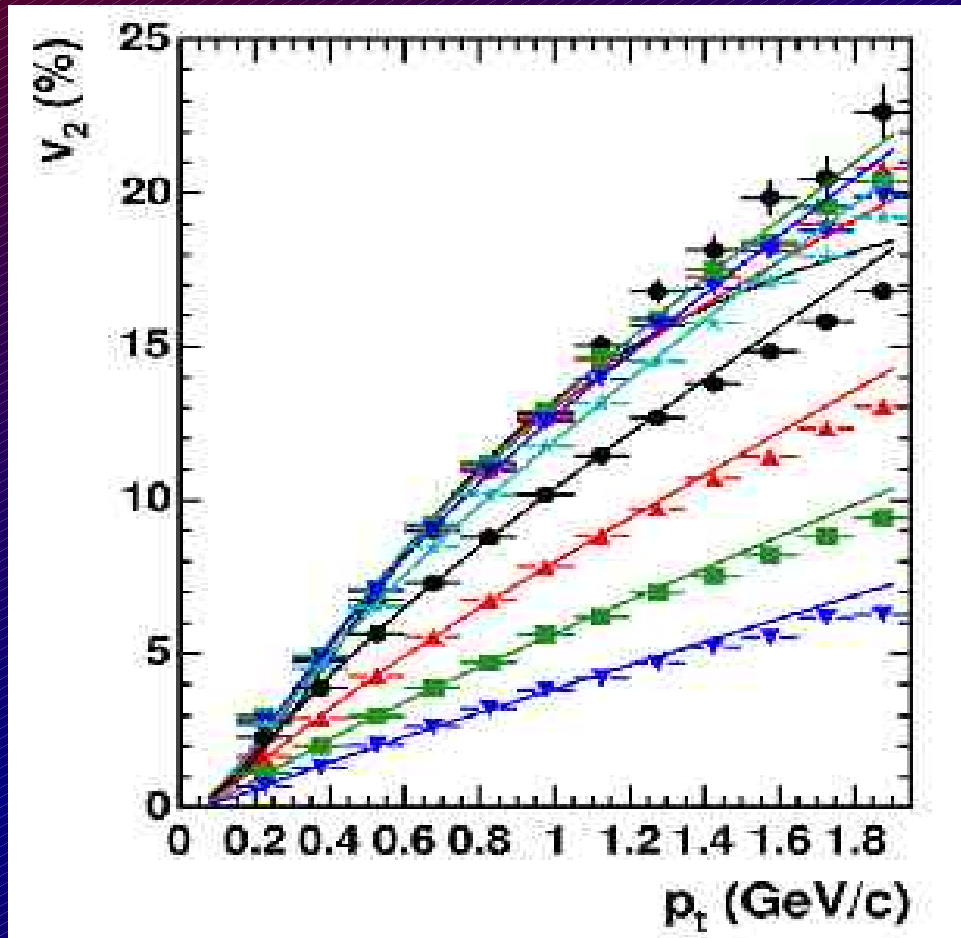


# $v_2$ from MRS at 90 degree

MRS 90 deg

0-50% central

Correction = 0.204  
-> ~ 5 times



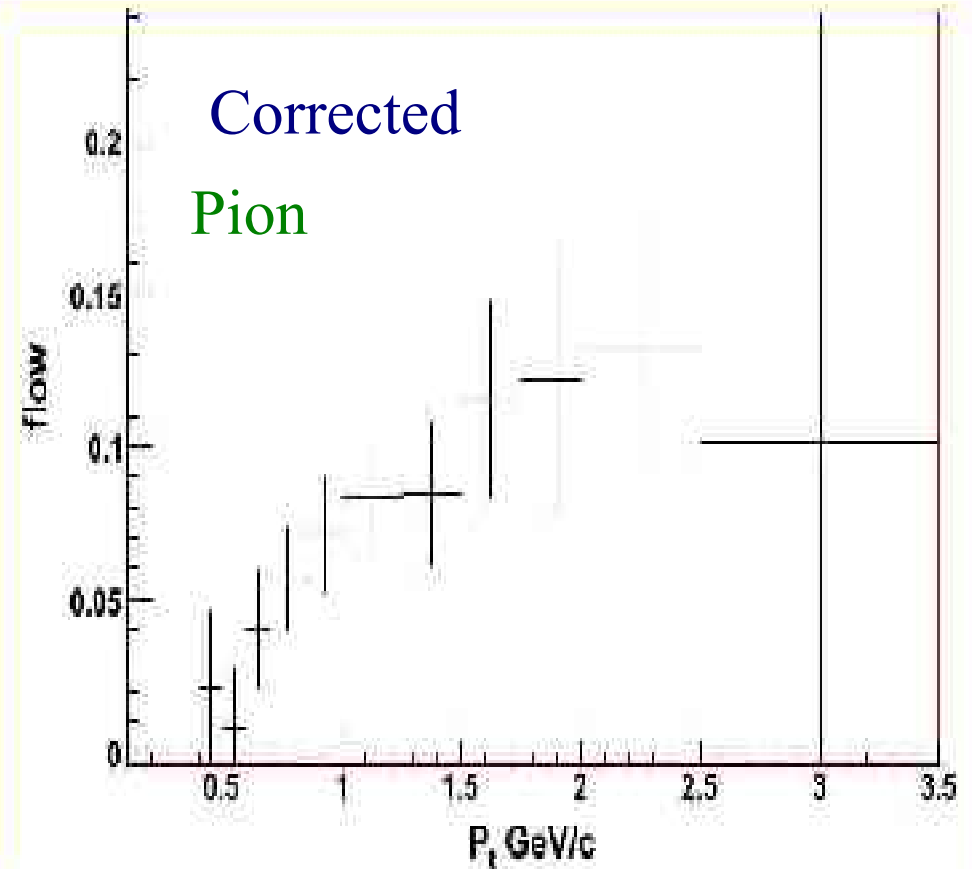
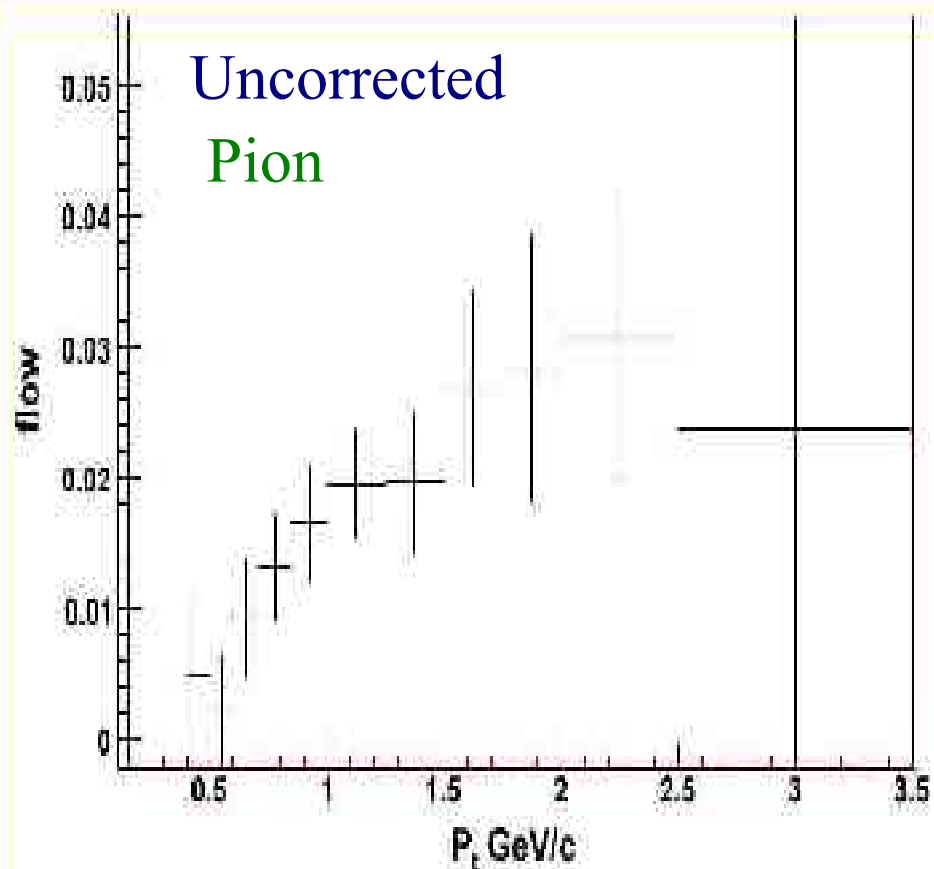
# V2 from MRS at 90 degree

MRS 90 deg

Correction = 0.233

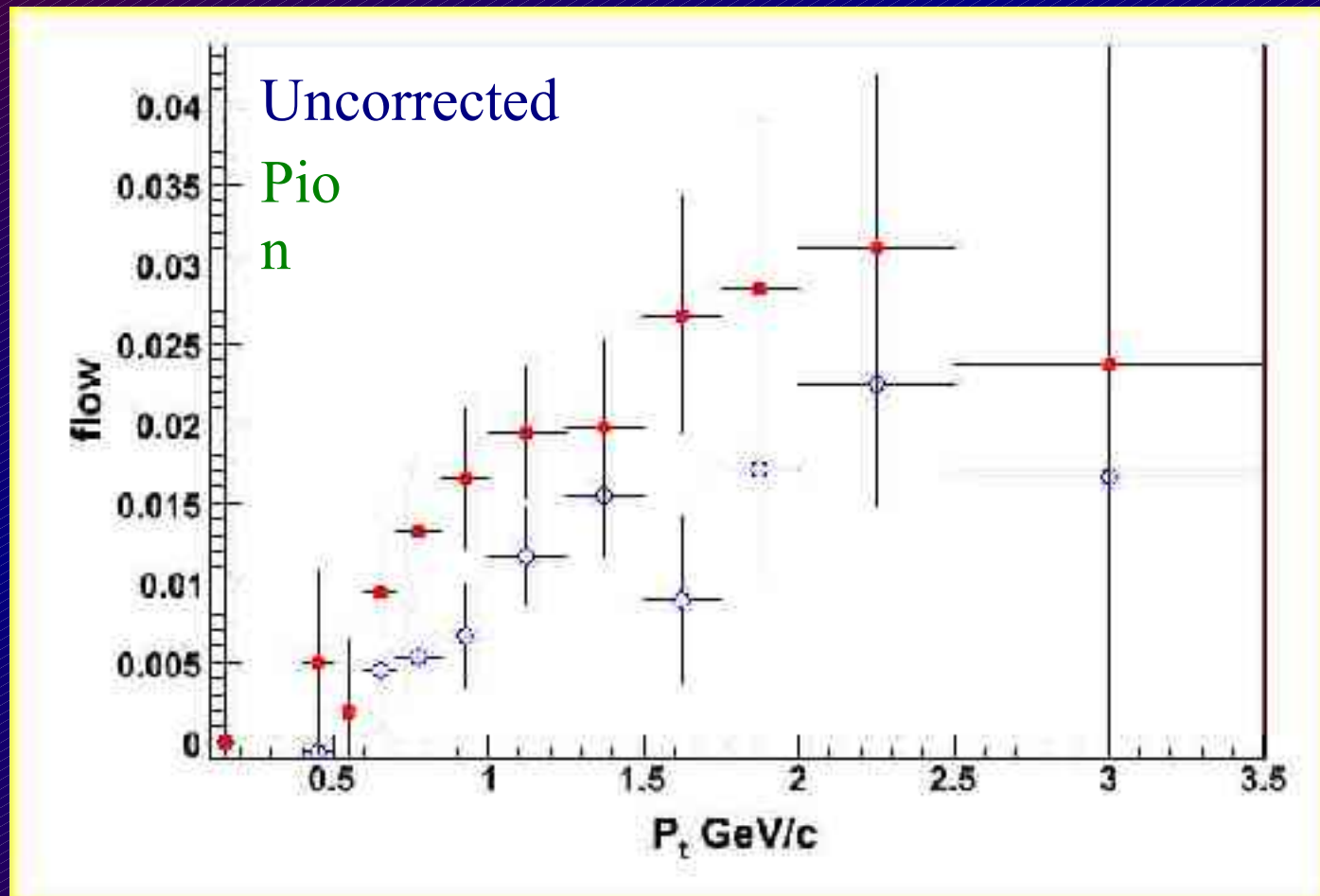
-> It is better than 0 – 50% selection

20-50% central



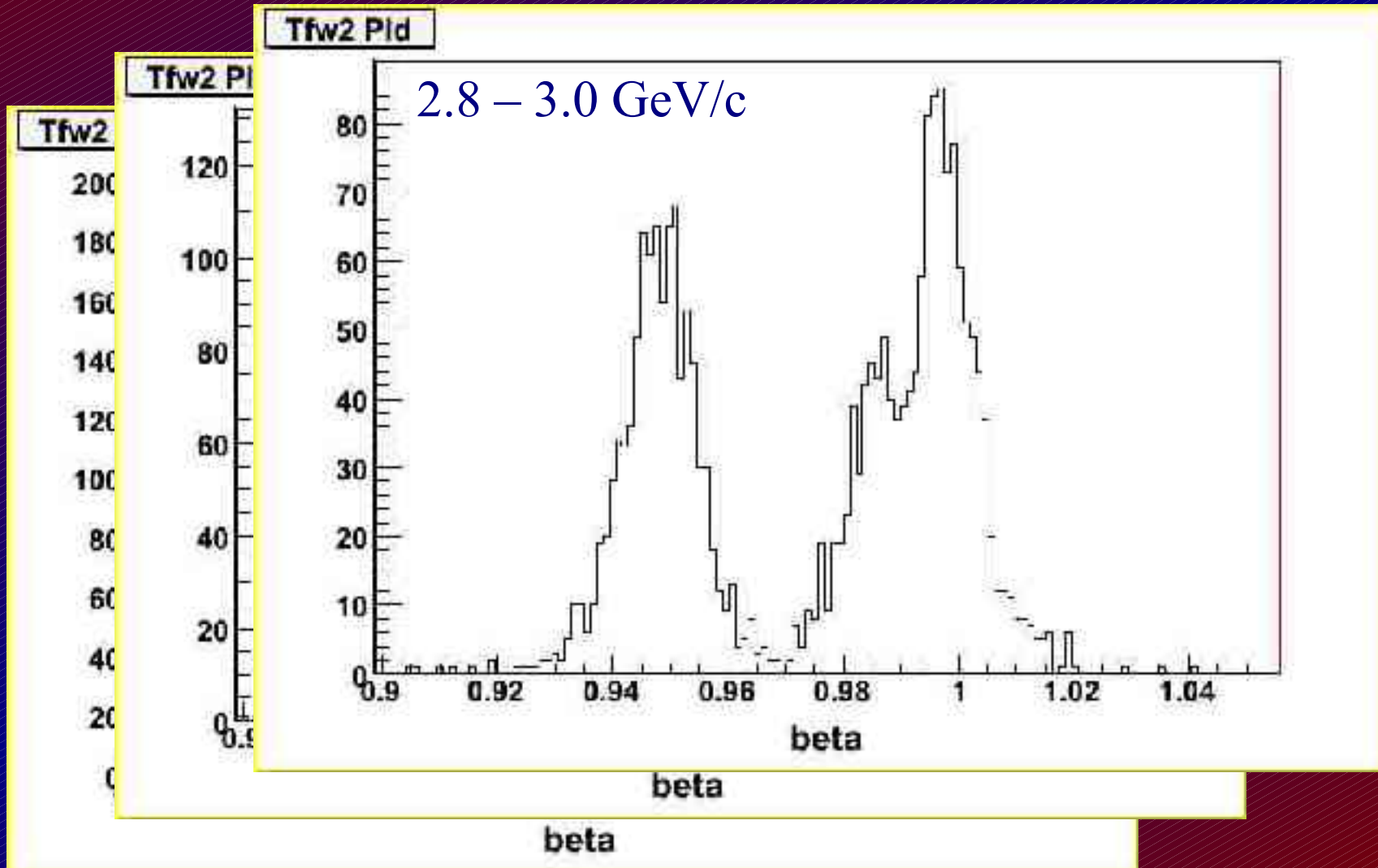
# Centrality dependence 90 deg

Red 20-50%  
Blue 0-50%





# TFW2 Pi-K Separation at 40 deg



# V2 at 40 deg

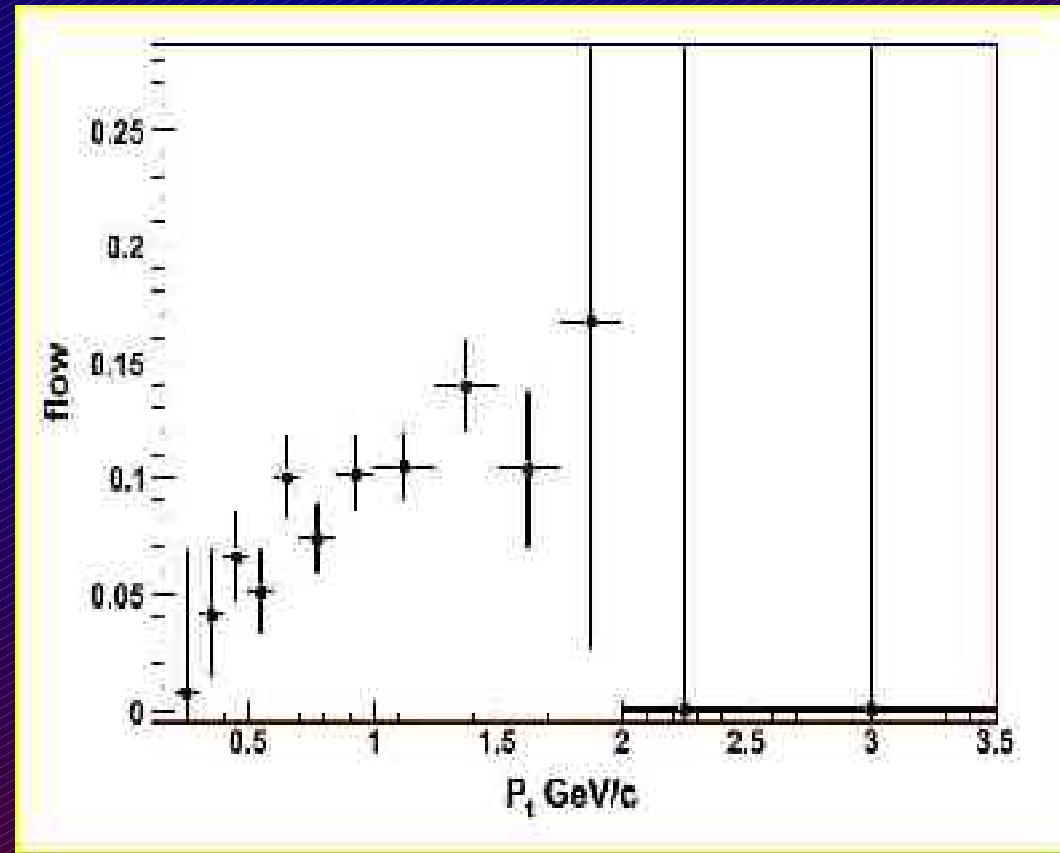
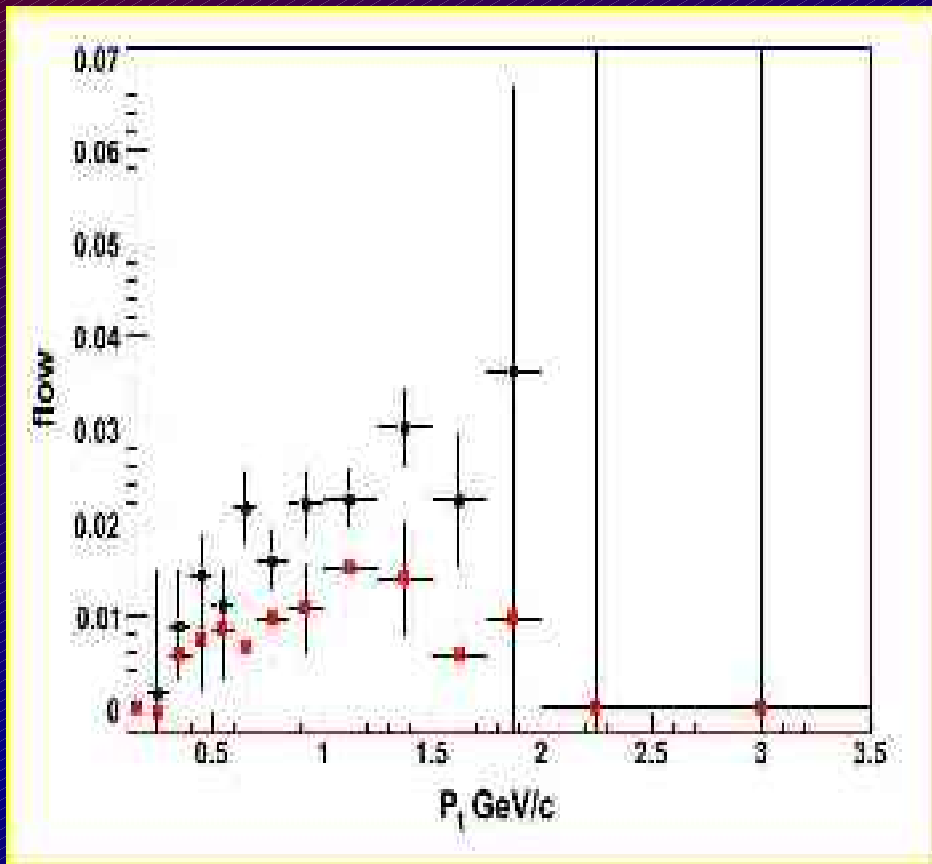
Pion

Red: 0 – 50 %

Black: 20 – 50 %

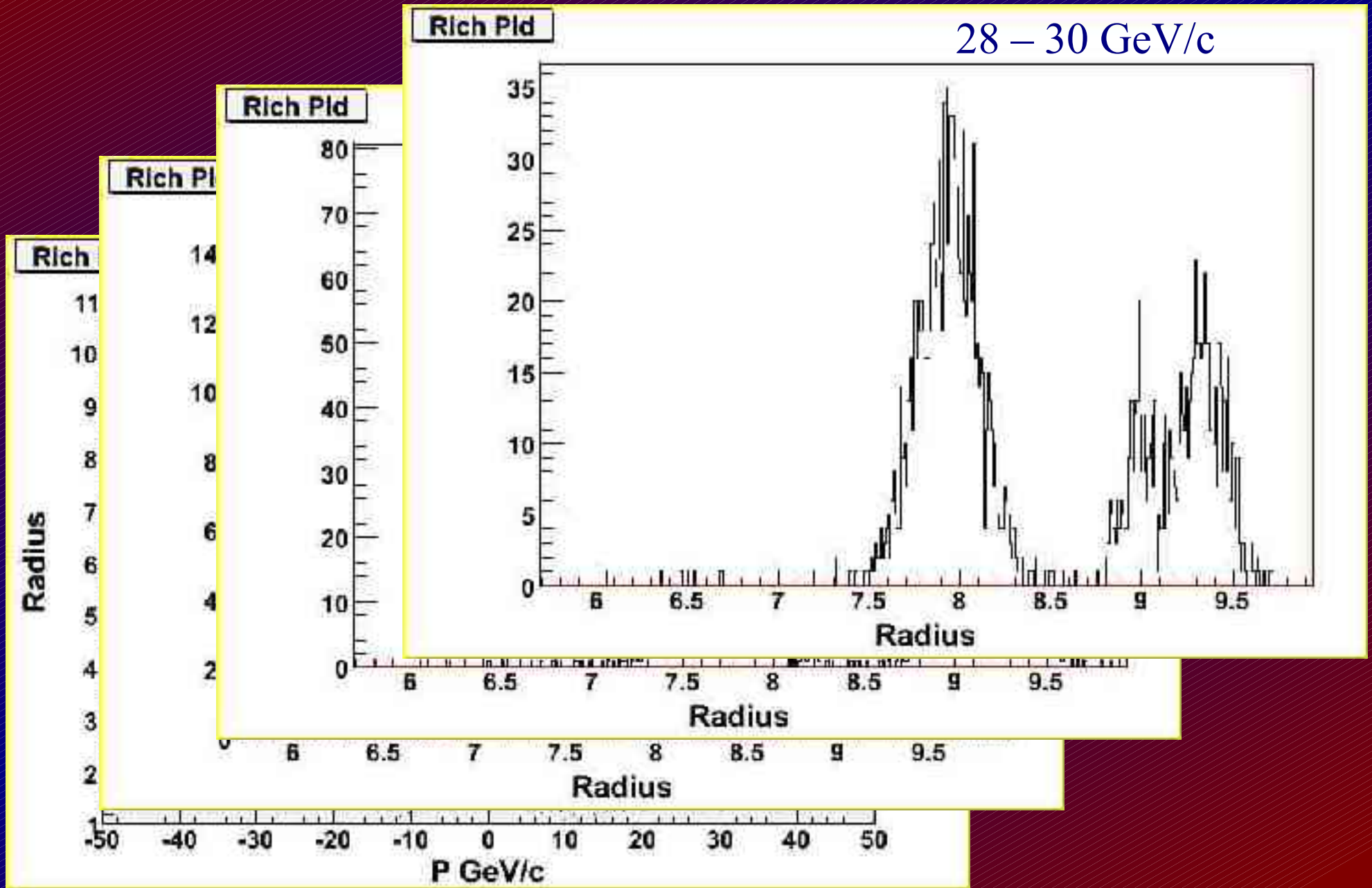
Corrected

Uncorrected

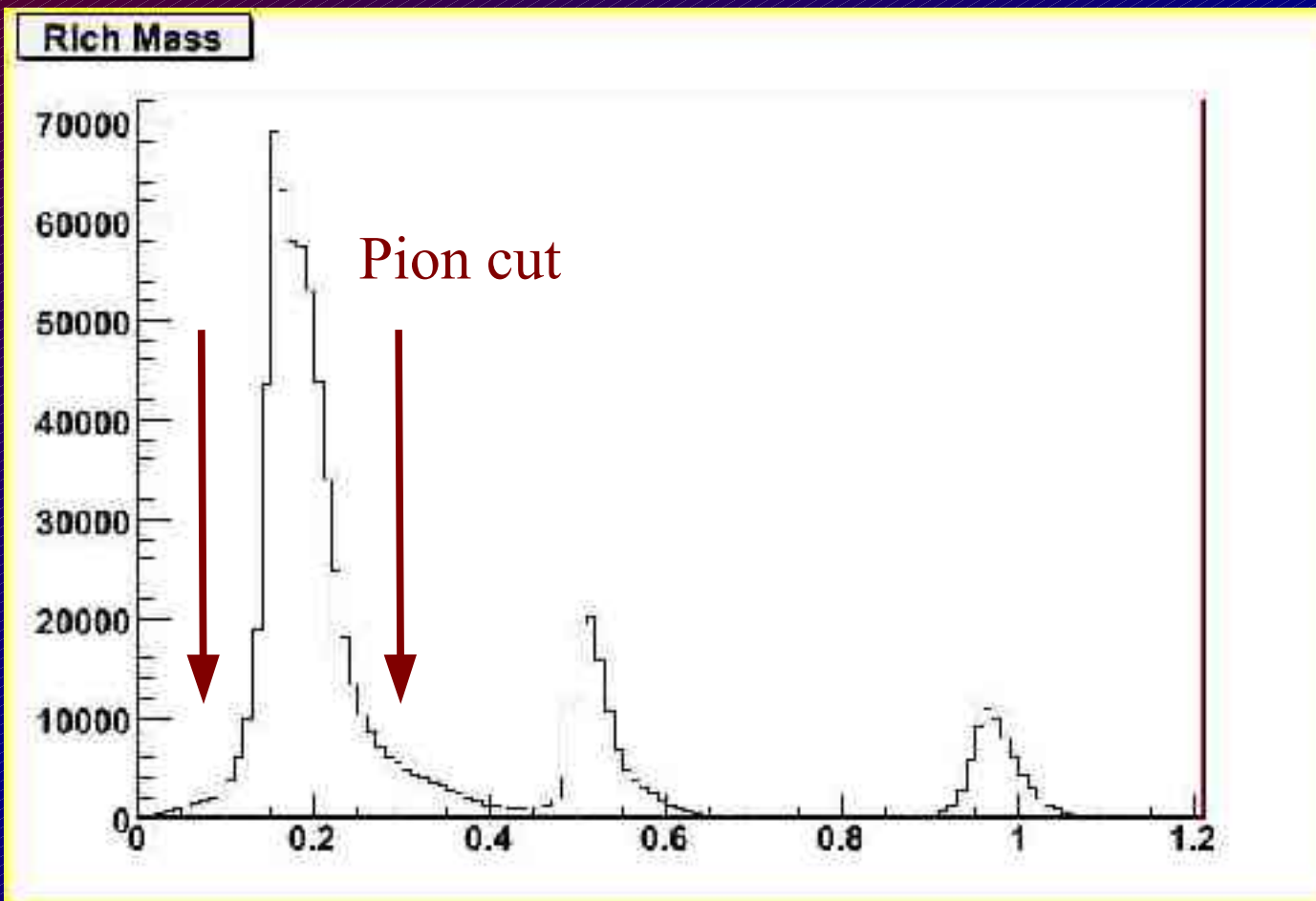




# RICH PID



# Pion selection in FS by RICH

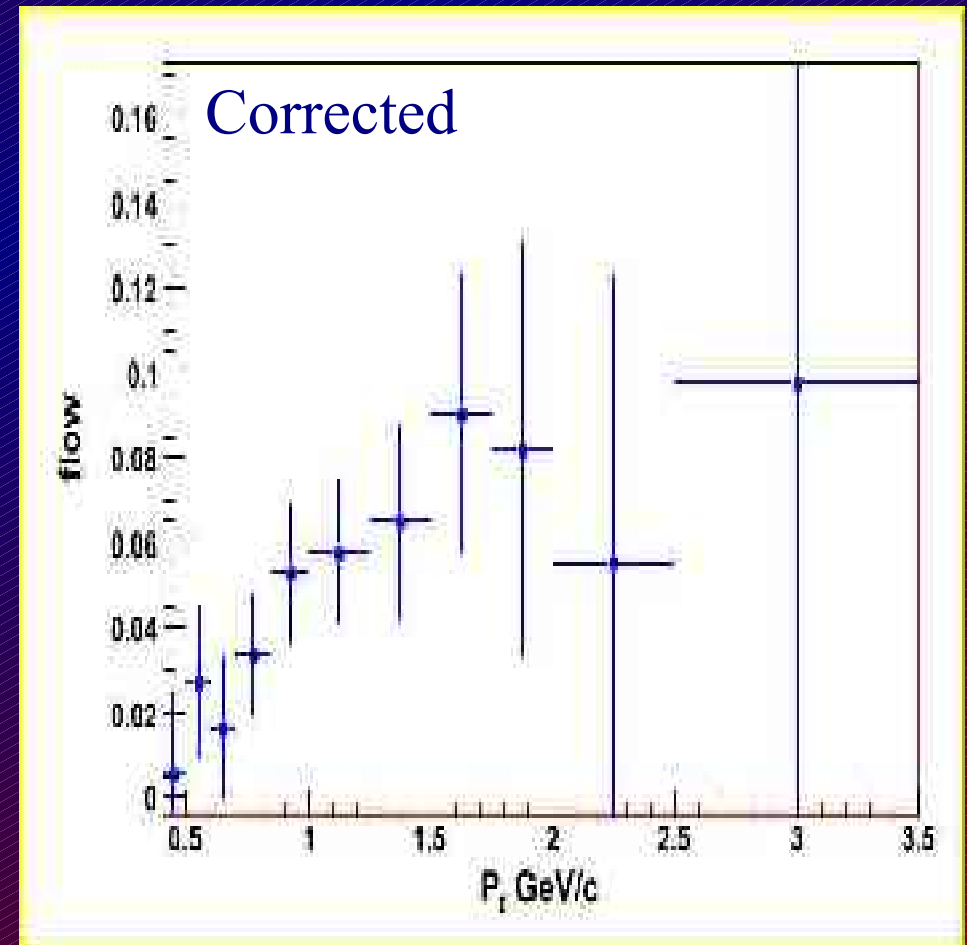
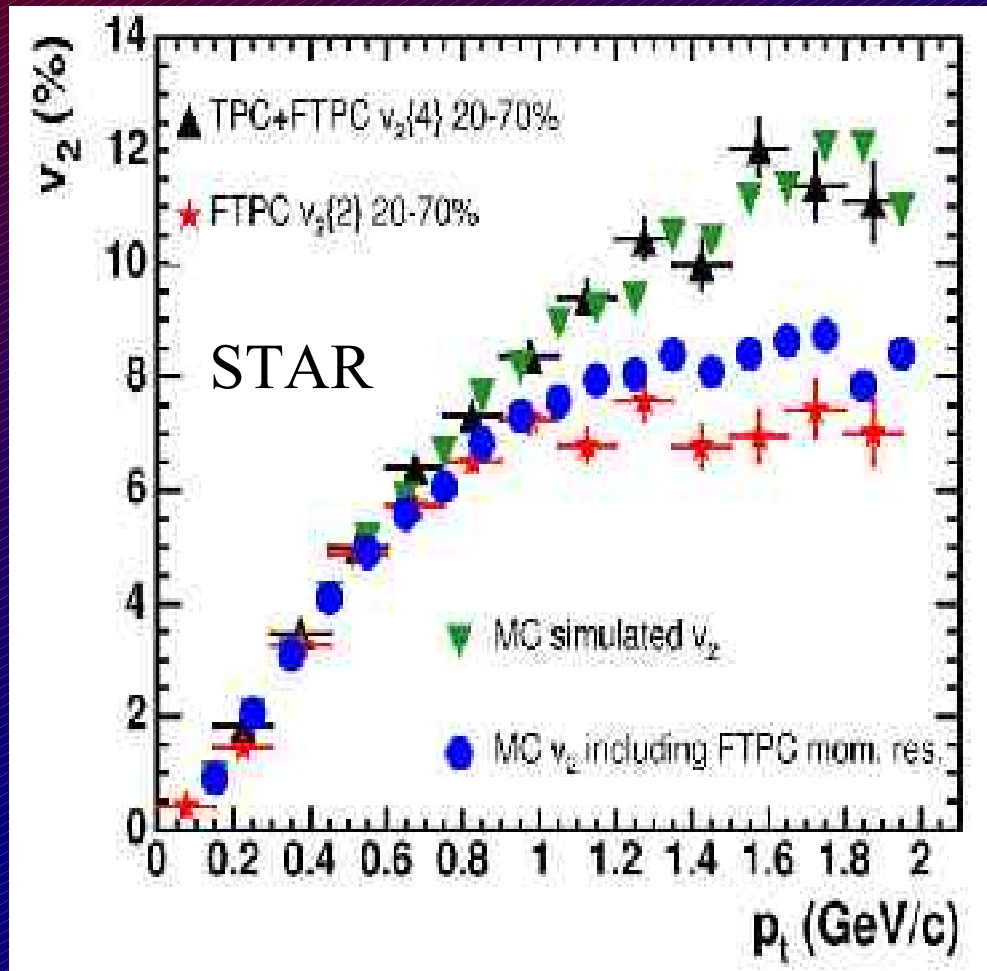


Cuts are currently done by RICH MASS. It will be changed to difference from the theoretical line.



# V2 at 4 deg

Pion



# Things to do

- To increase statistics for low  $P_t$ , use H1 + C1
  - What is the rejection factor in C1?
- To increase PID range in MRS, use C4
  - What is the rejection factor in C4?
- See how Proton is doing?
- See how Kaon is doing?
- Theoretical prediction ---> Punch line?
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