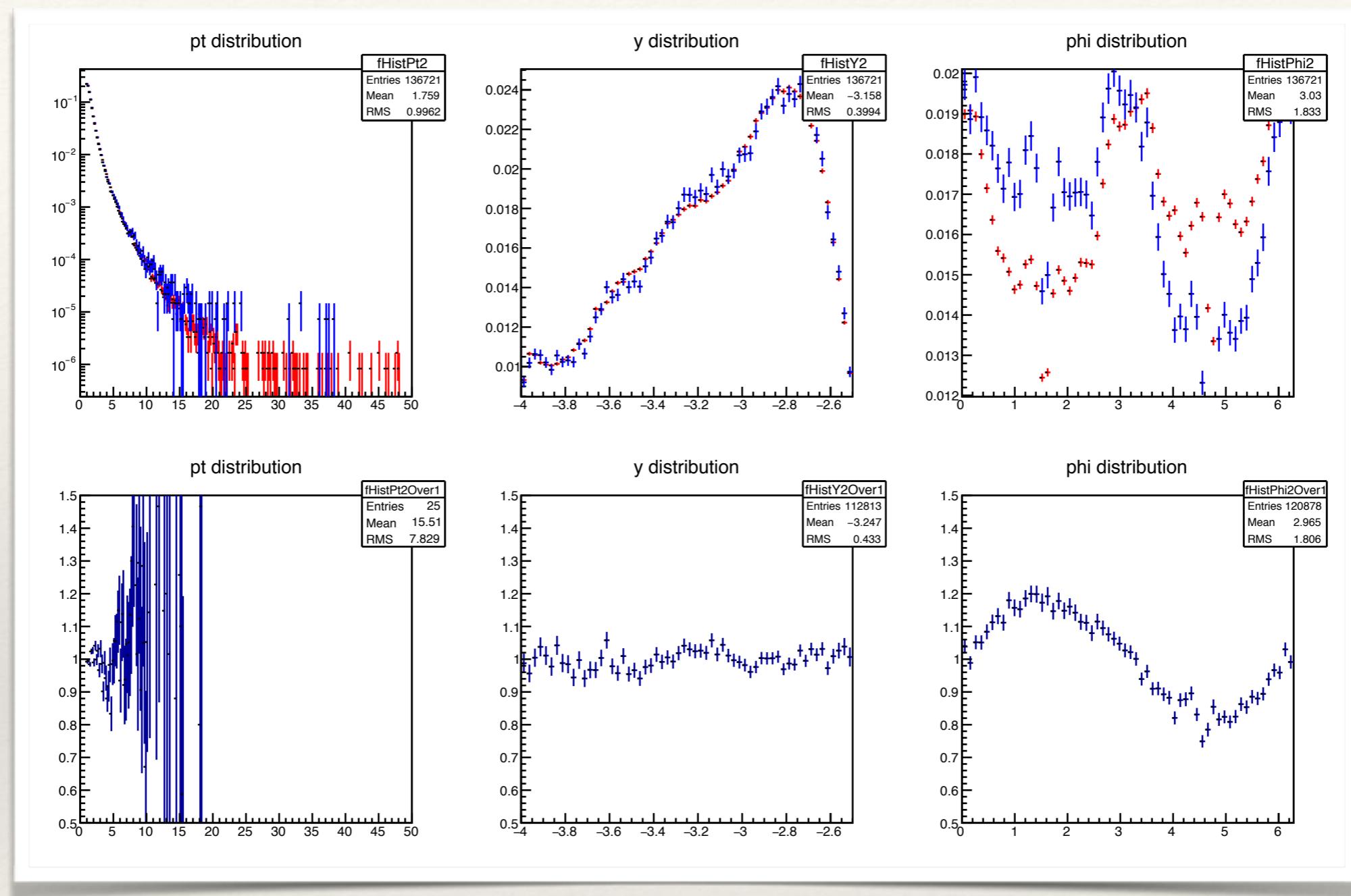


# Tracking Efficiency for LHC15g

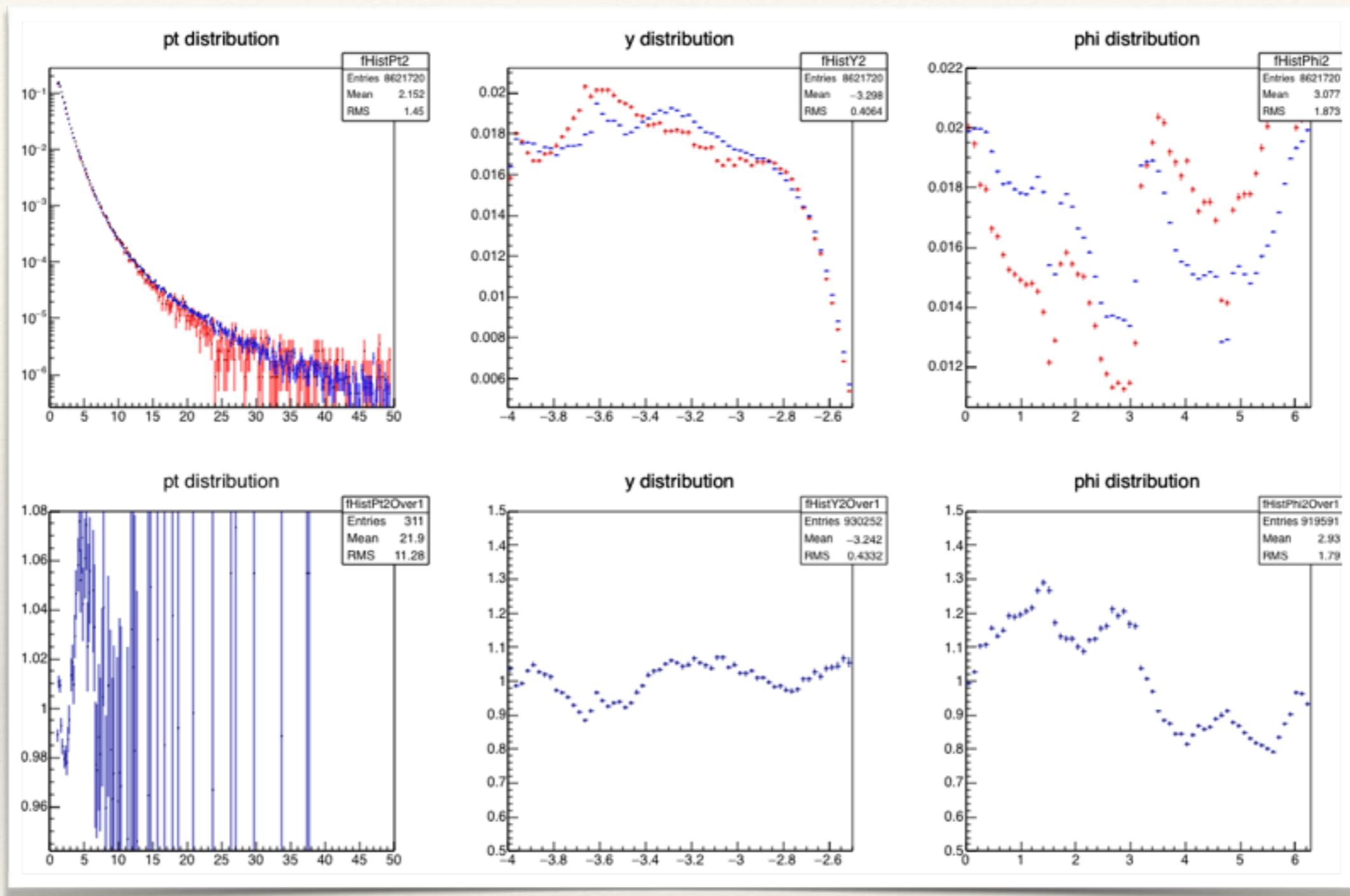
- ❖ Here we compare results of the muon tracking efficiency for two different class of trigger : CMUL and CMSL
- ❖ This work is done on the period LHC15g
- ❖ Same track selections and same run normalisation for all results

# Crosschecks for CMSL



Distribution well reproduced expect for phi at the moment

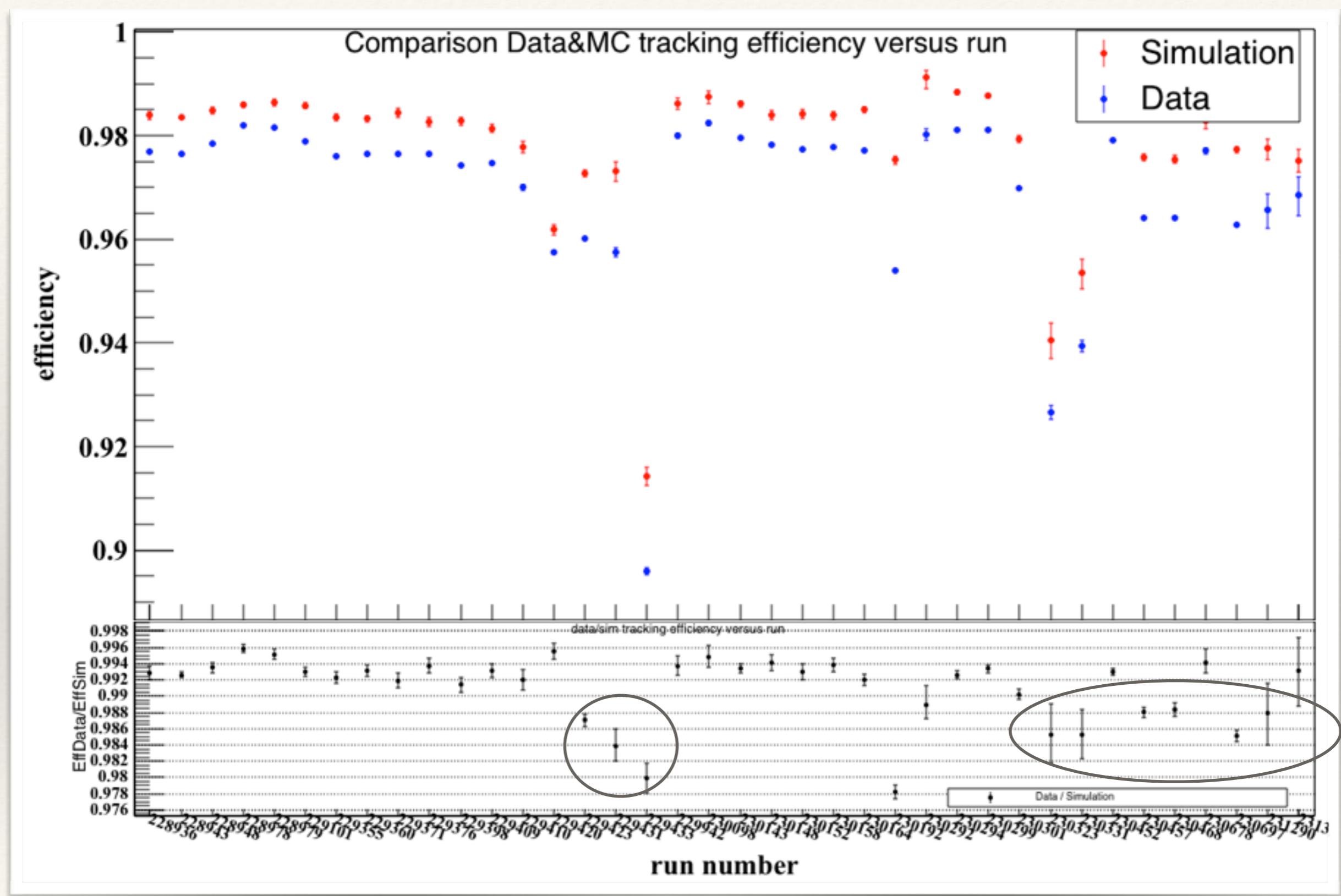
# Crosschecks for CMUL



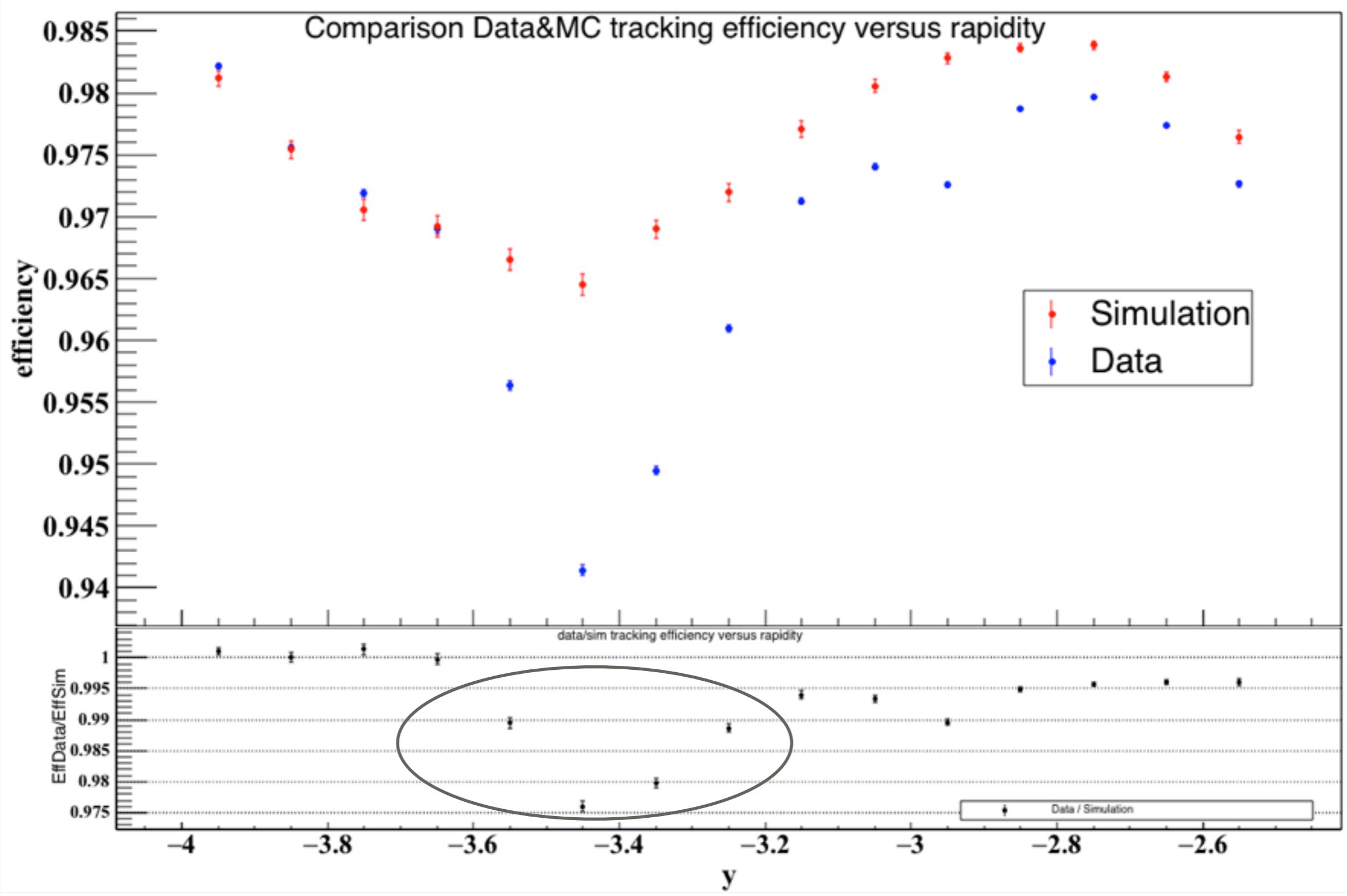
Not so good but not so bad either ...

# CMSL results

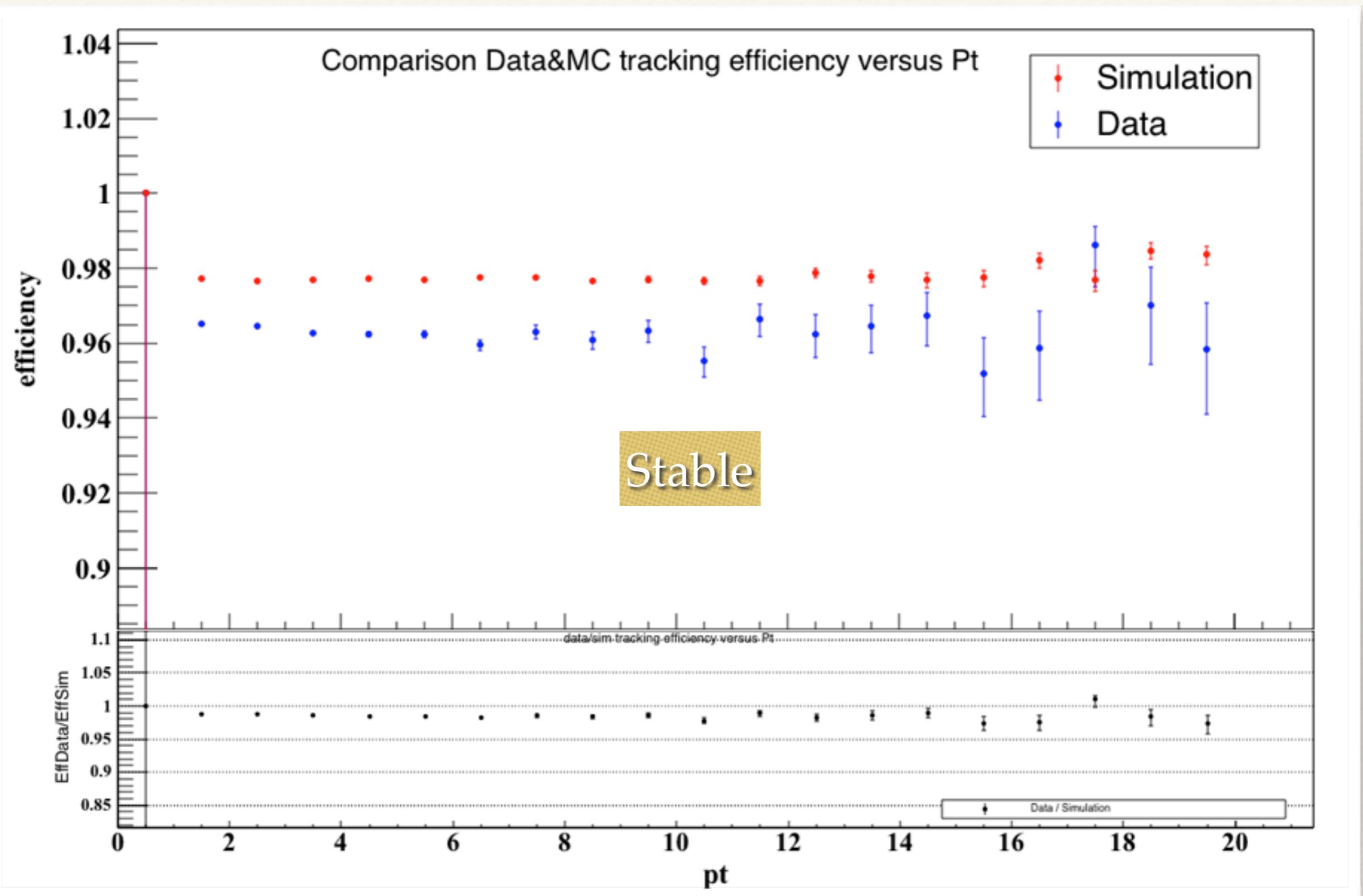
# Efficiency vs run



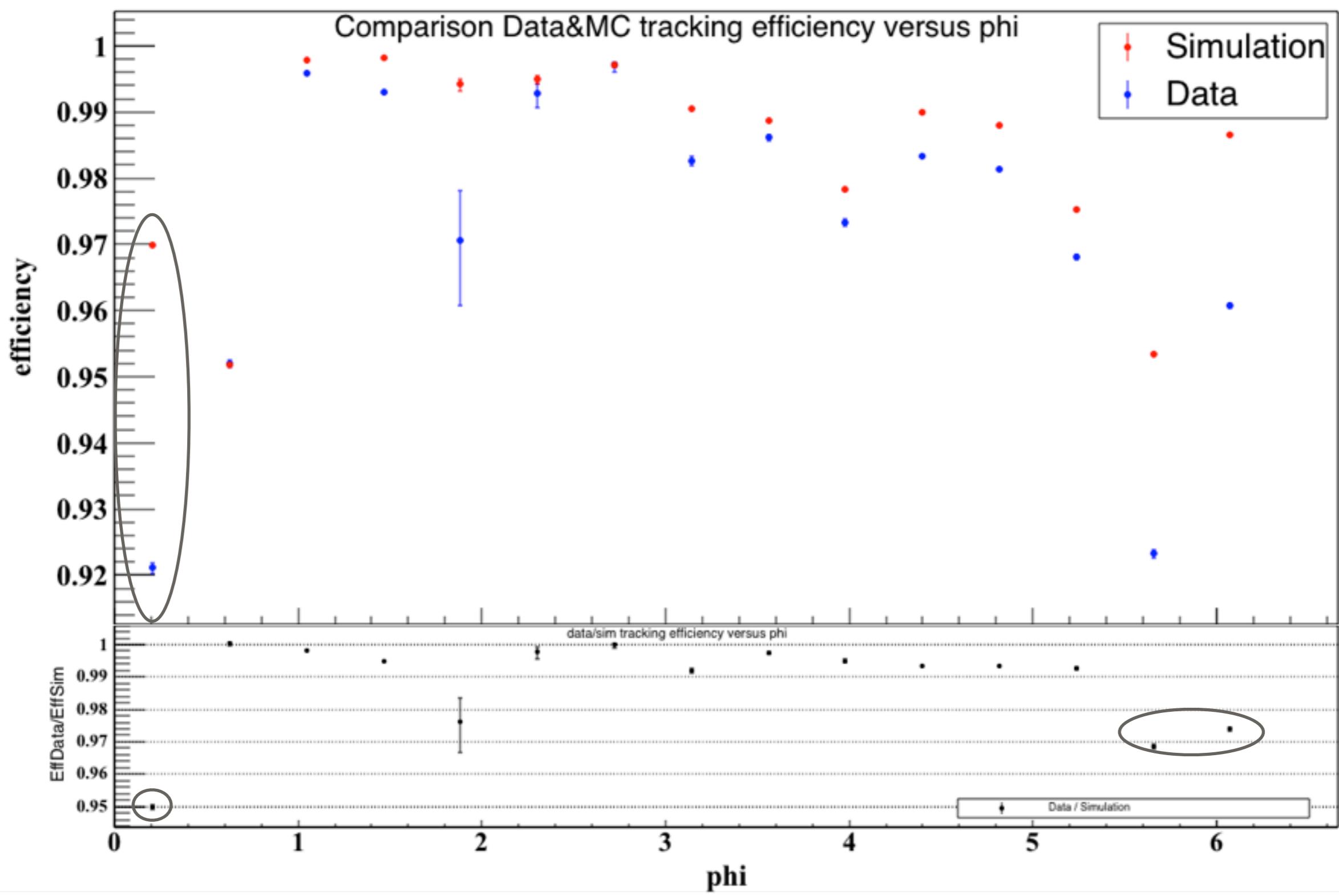
# Efficiency vs rapidity



# Efficiency vs $p_T$

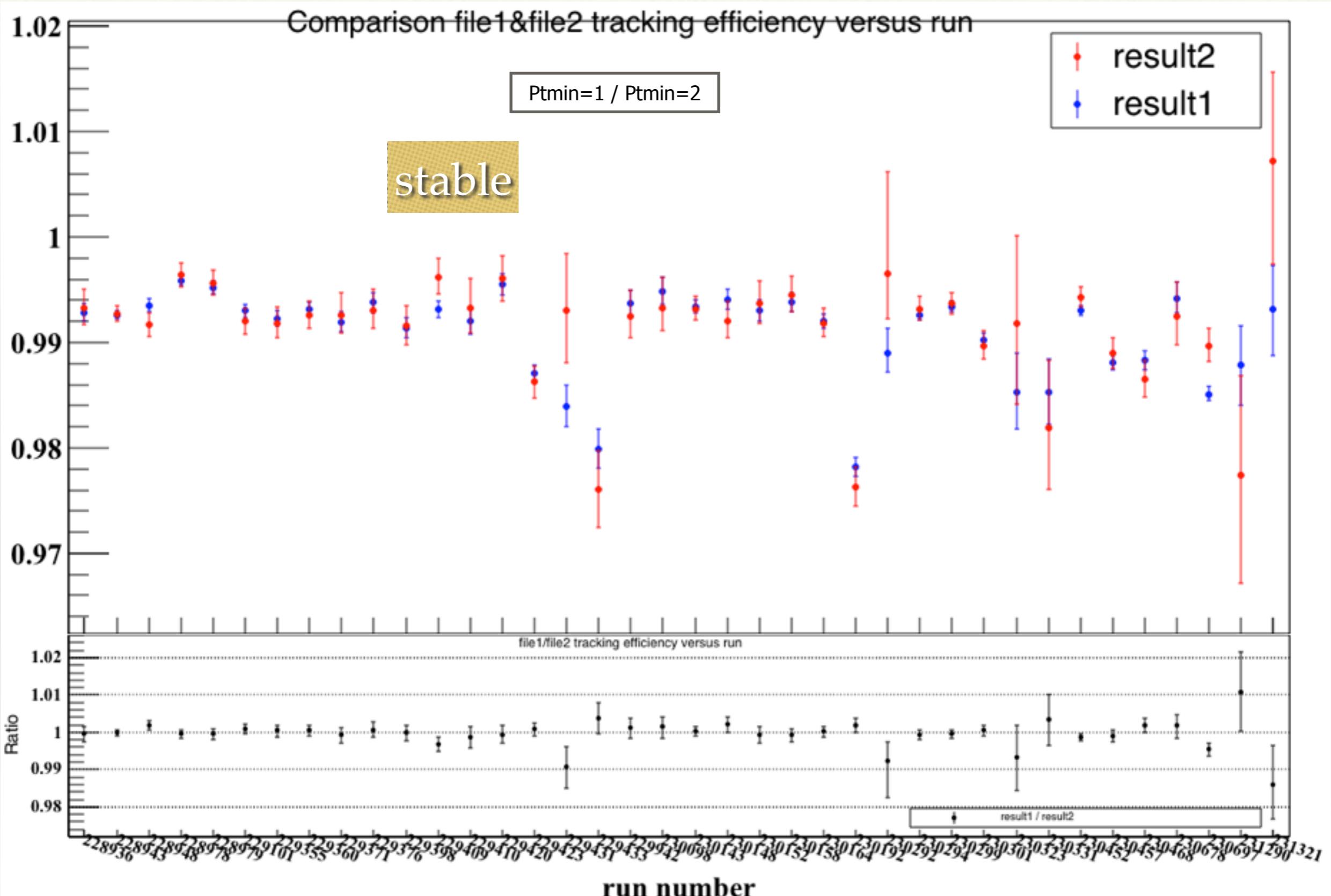


# Efficiency vs phi

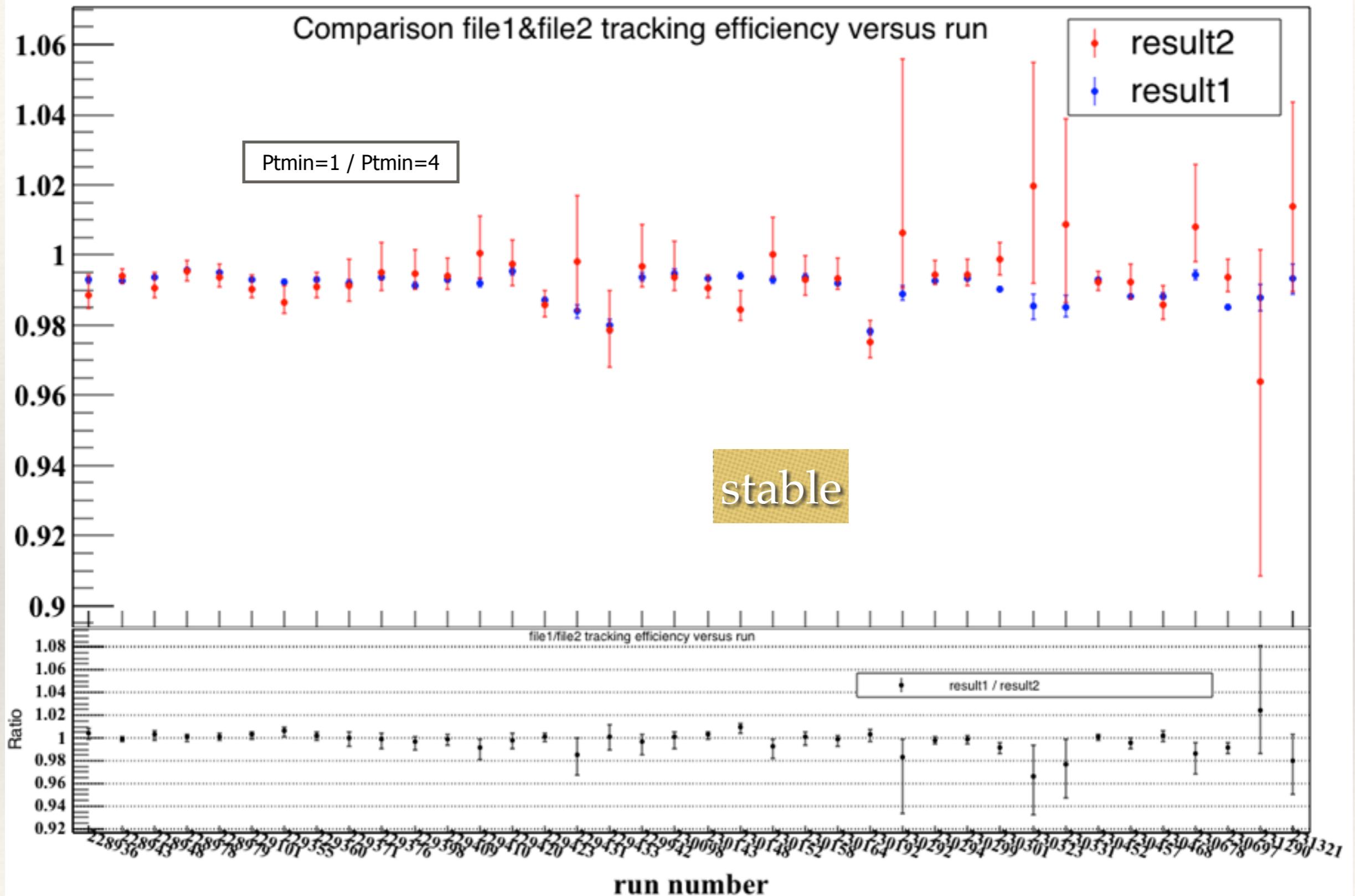


CMSL results with various Pt min

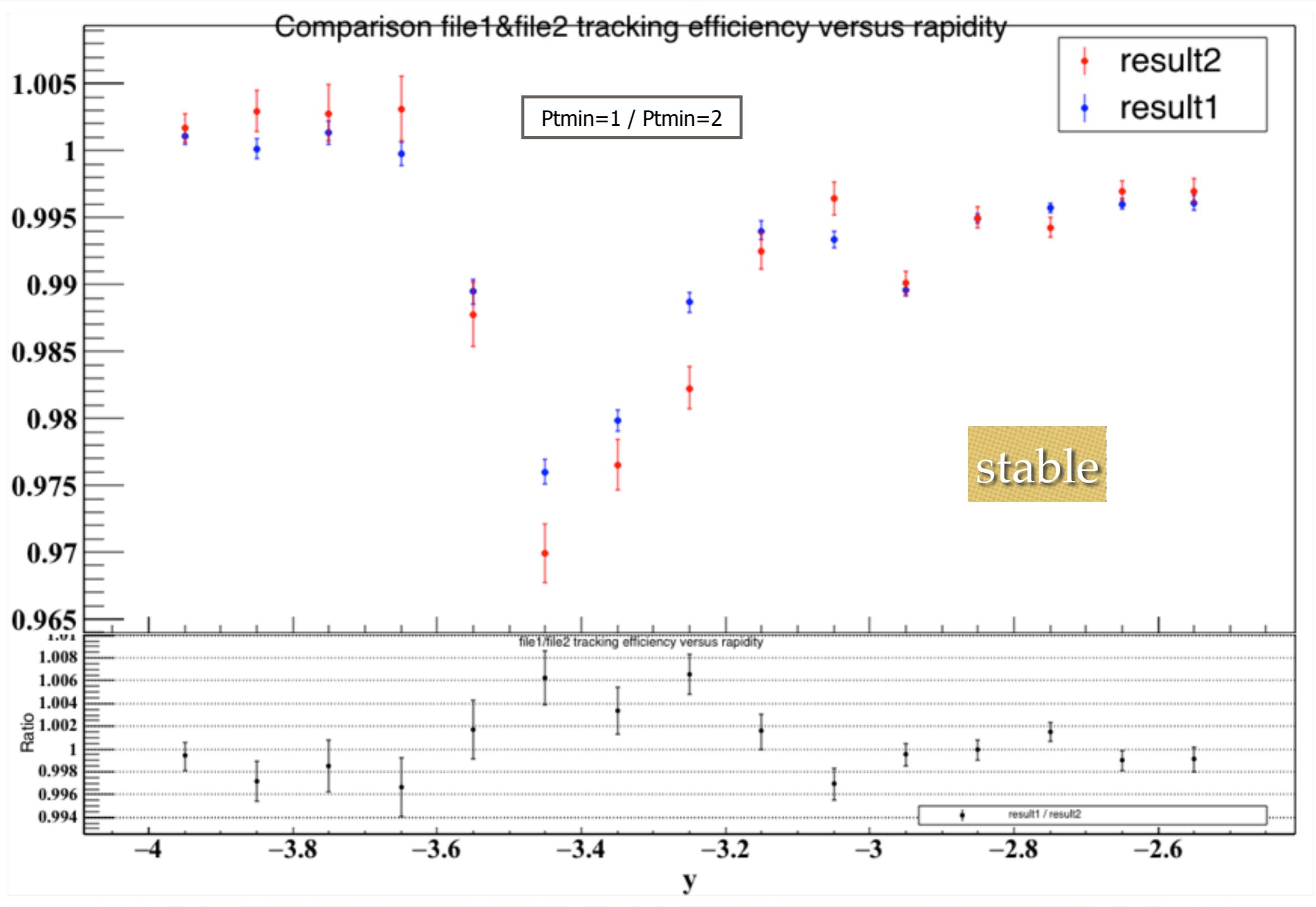
# Efficiency versus Run



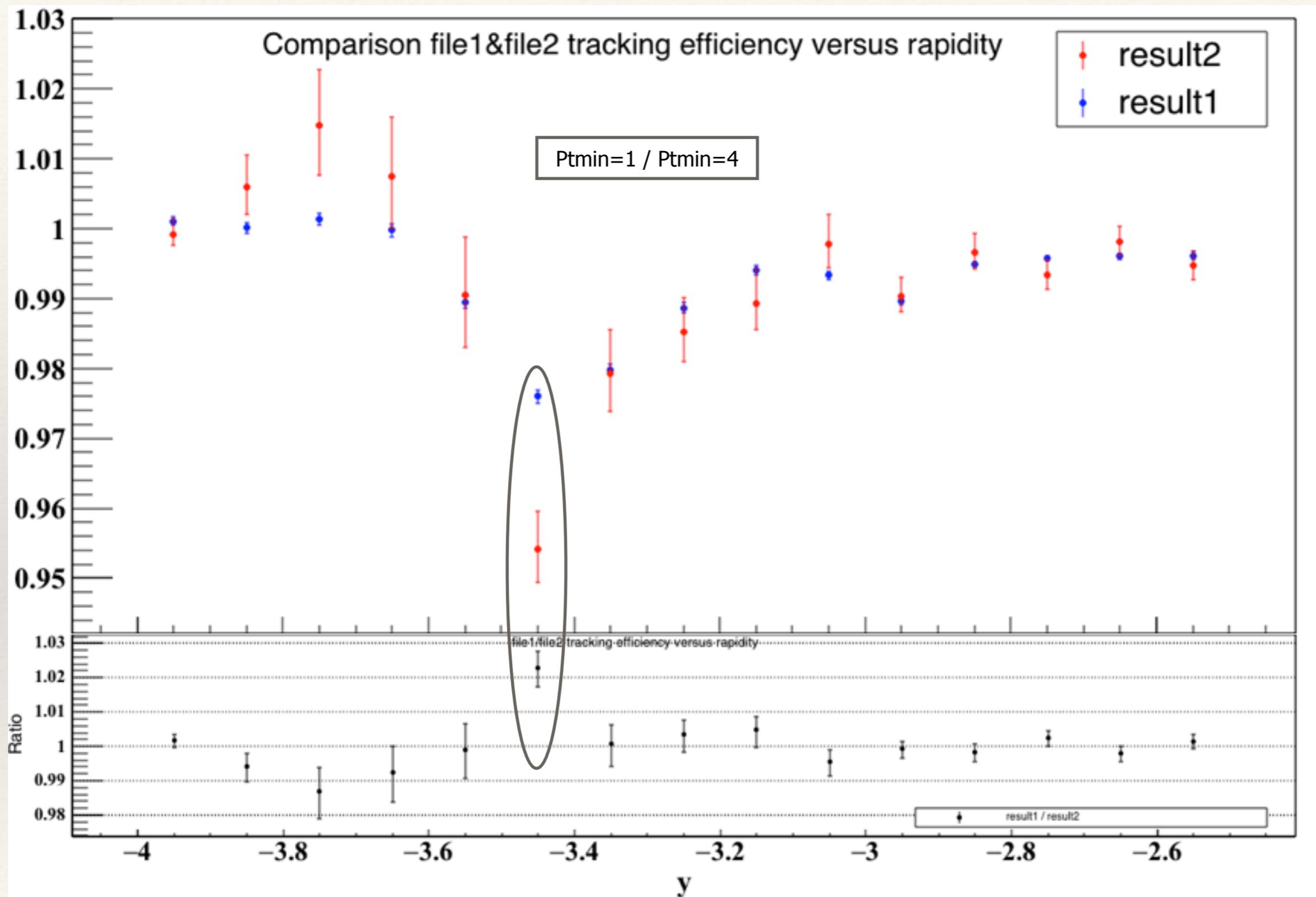
# Efficiency versus Run



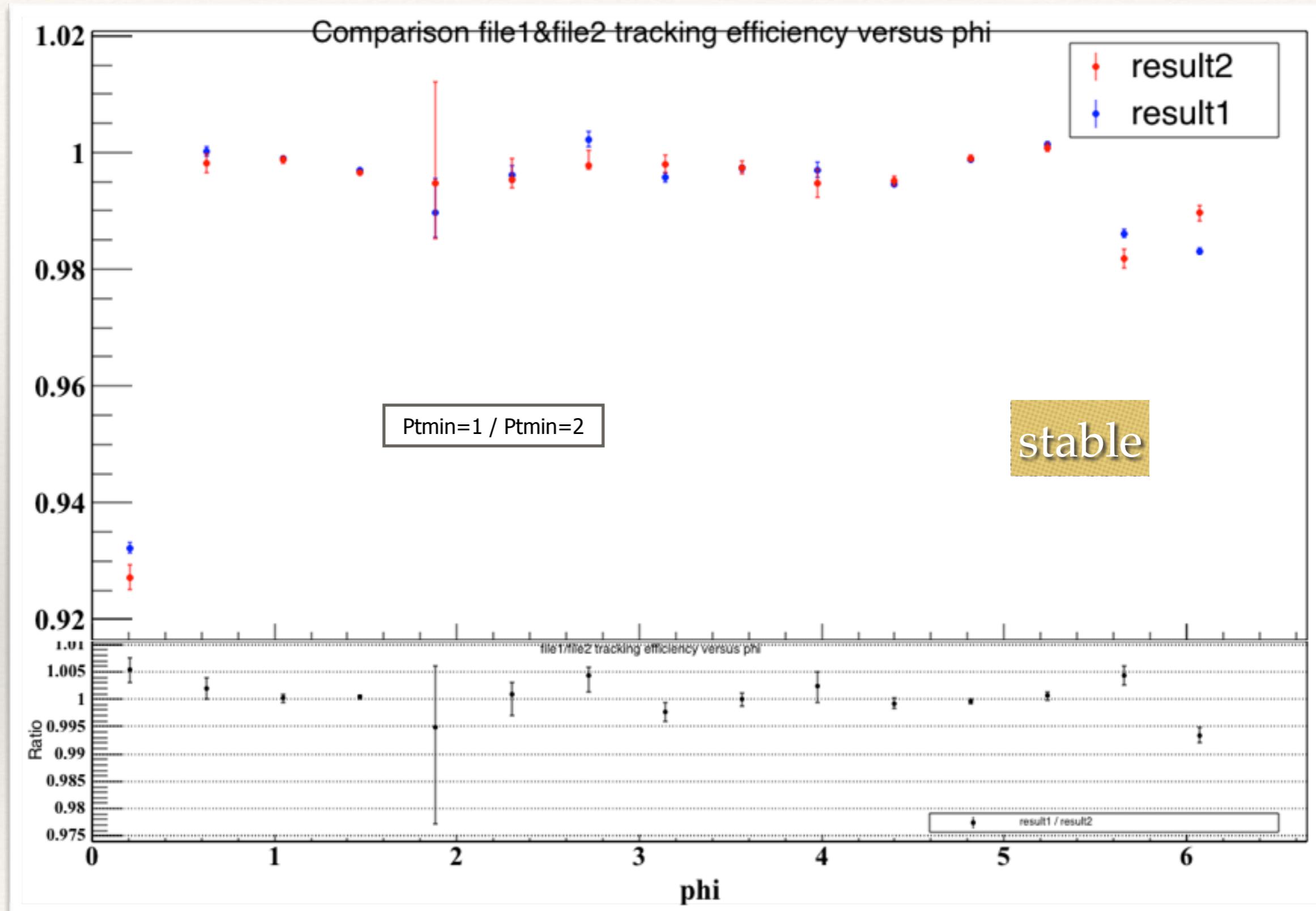
# Efficiency versus Rapidity



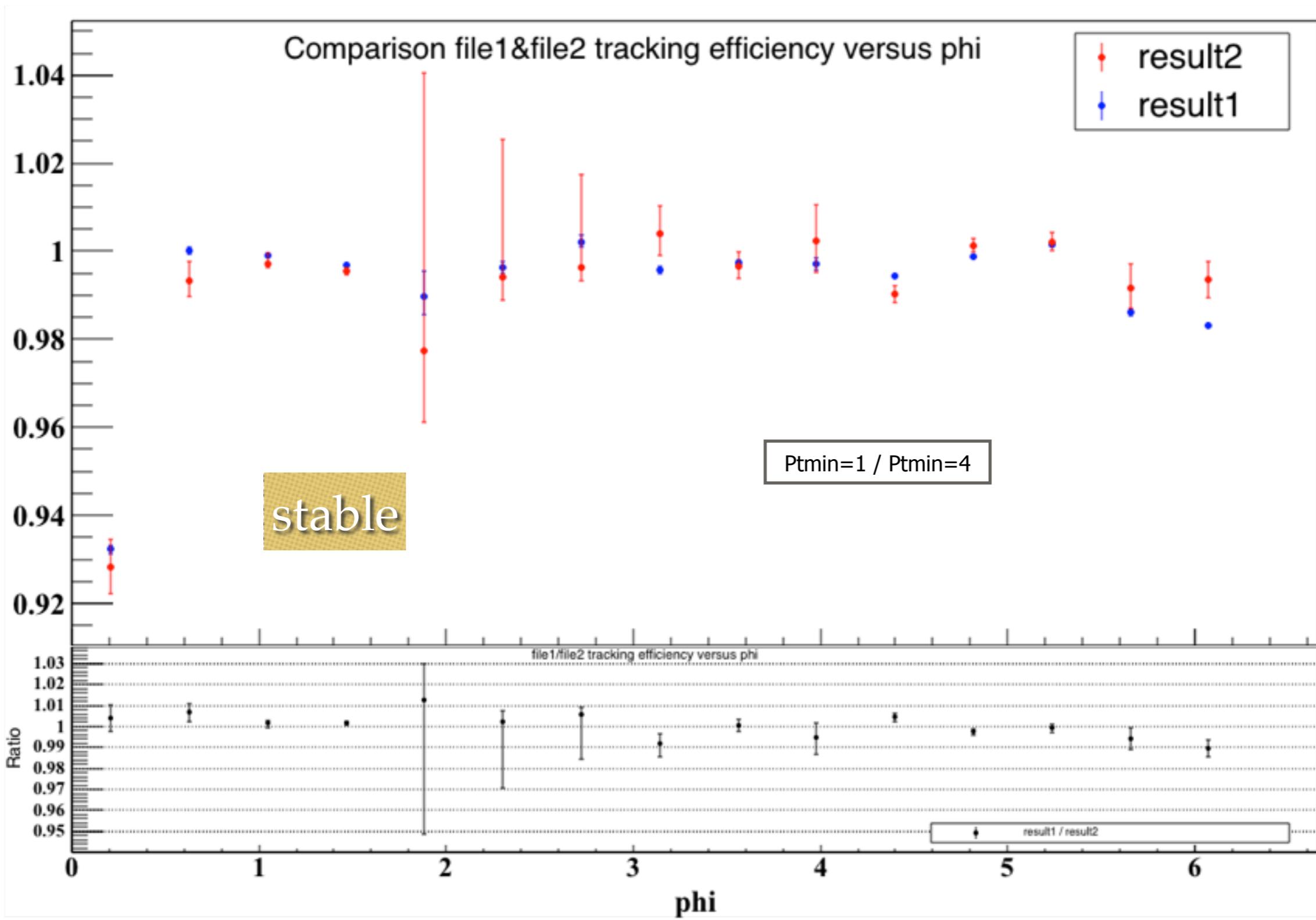
# Efficiency versus Rapidity



# Efficiency versus Phi

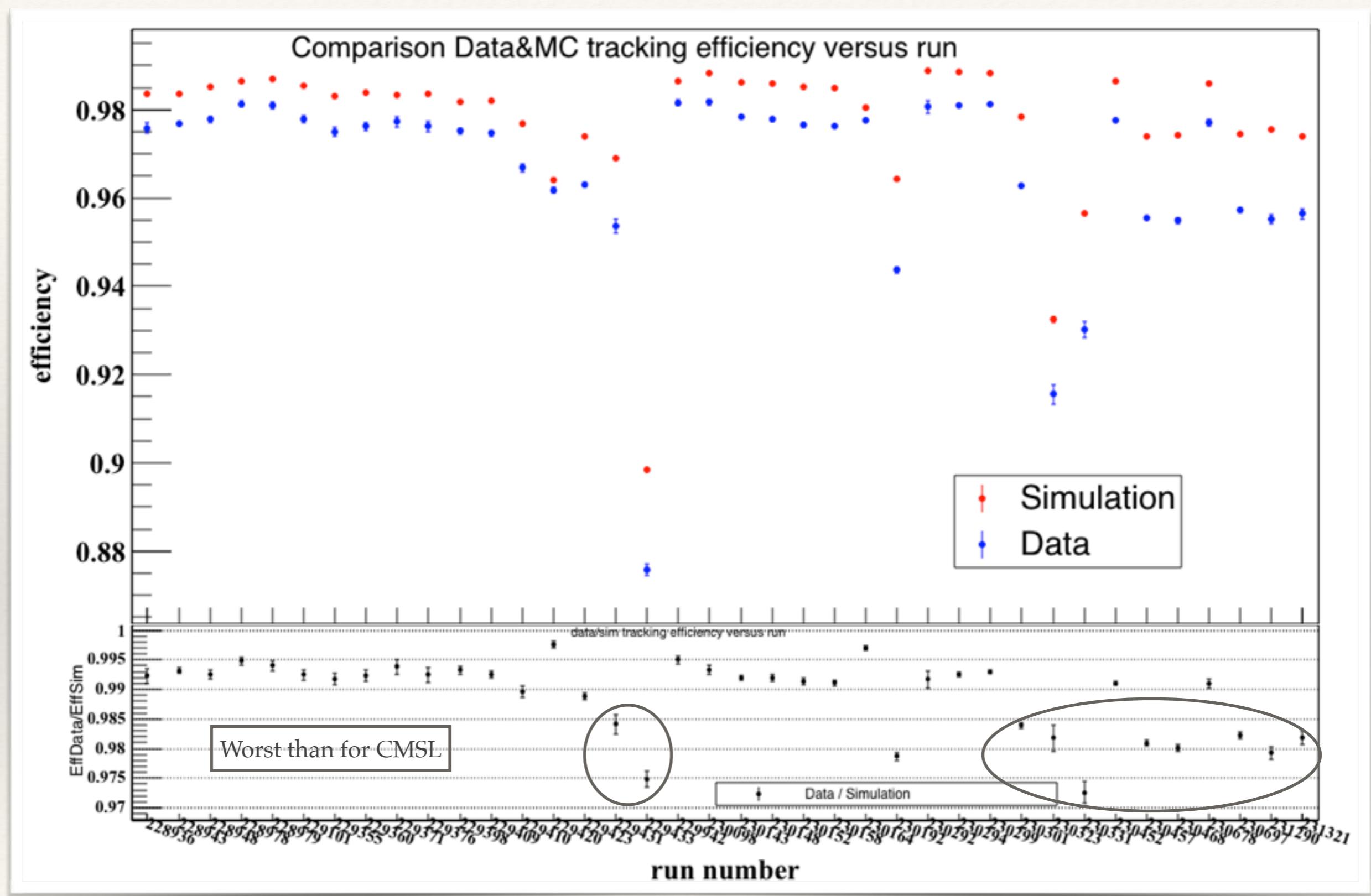


# Efficiency versus Phi

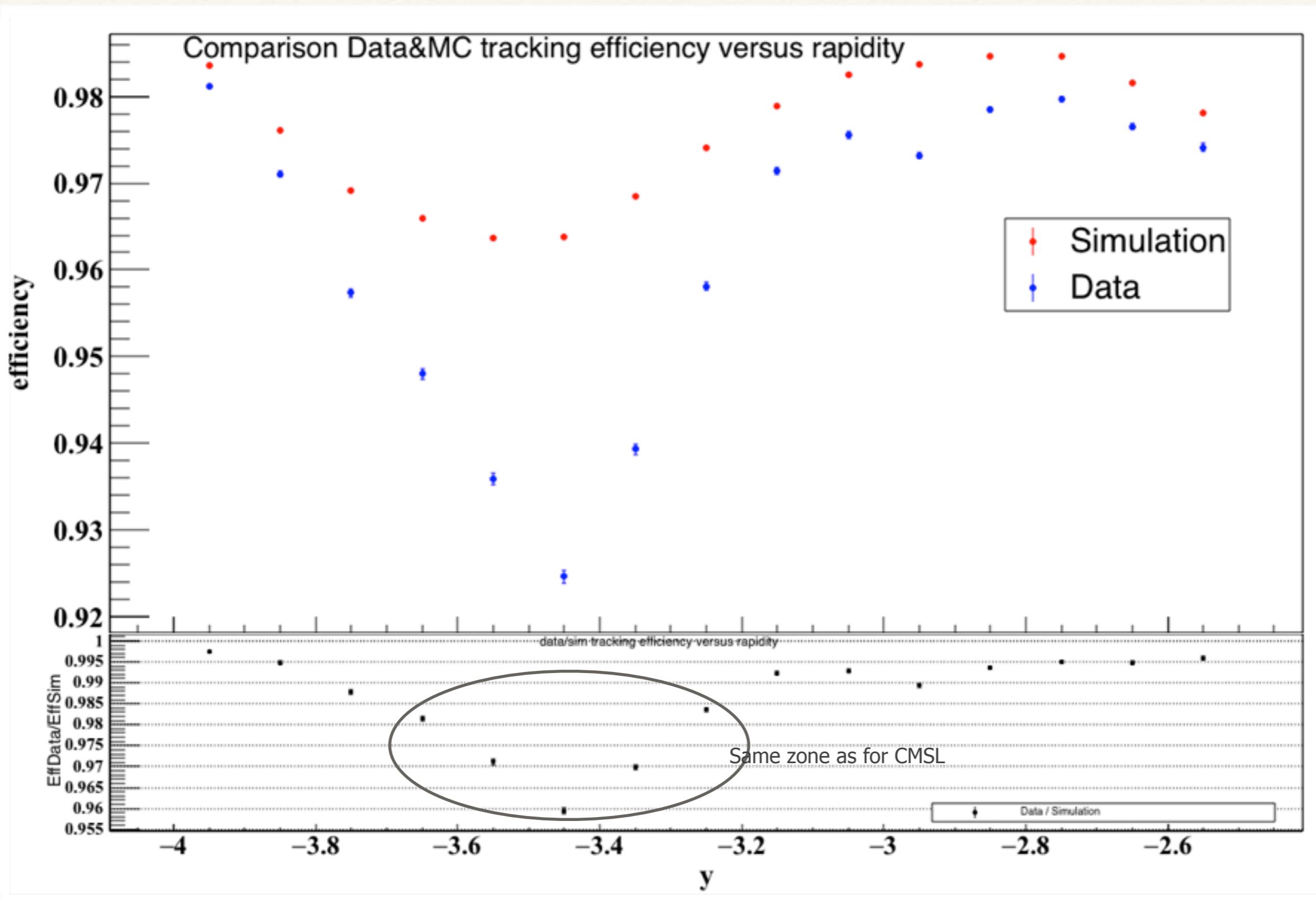


# CMUL results

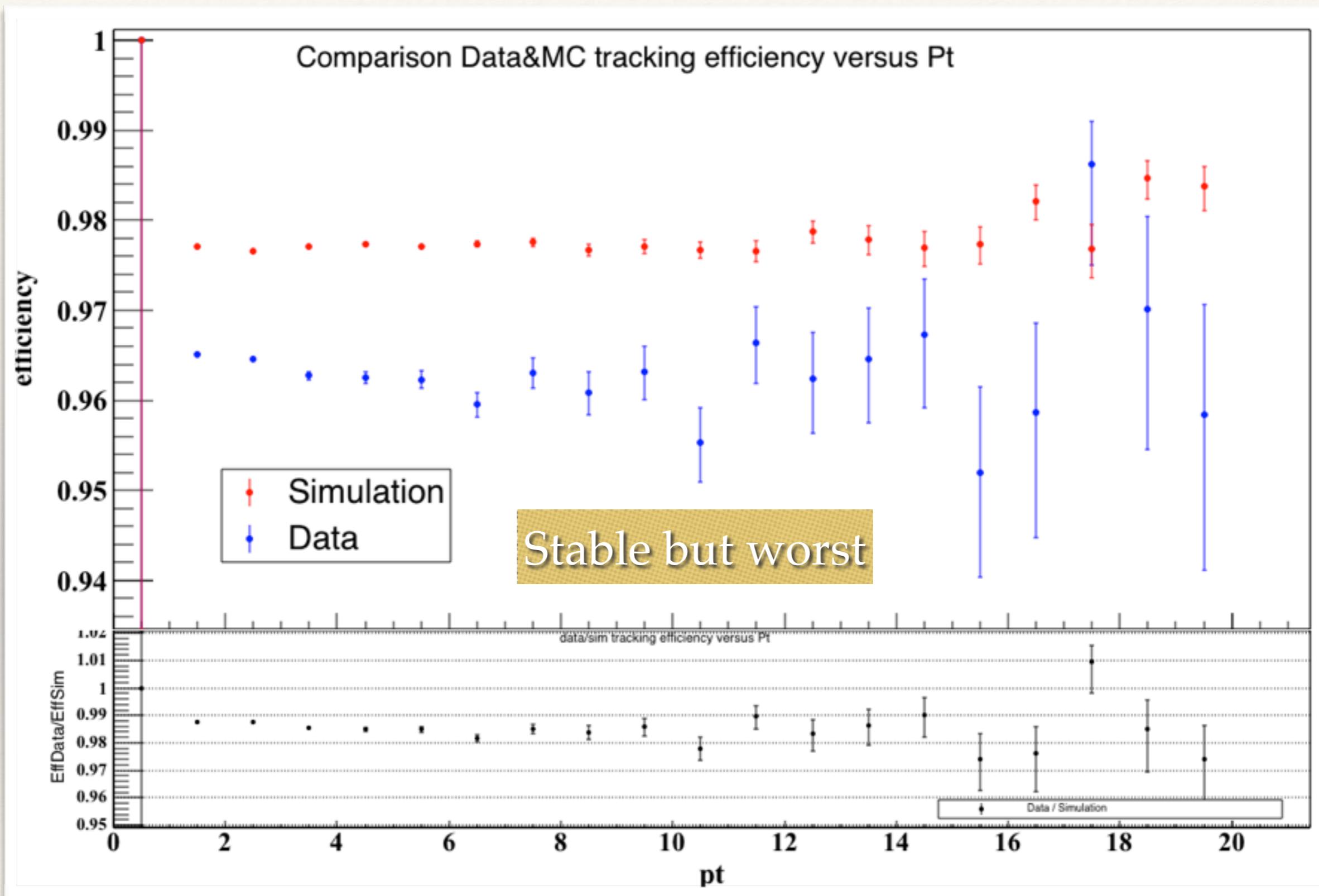
# Efficiency vs run



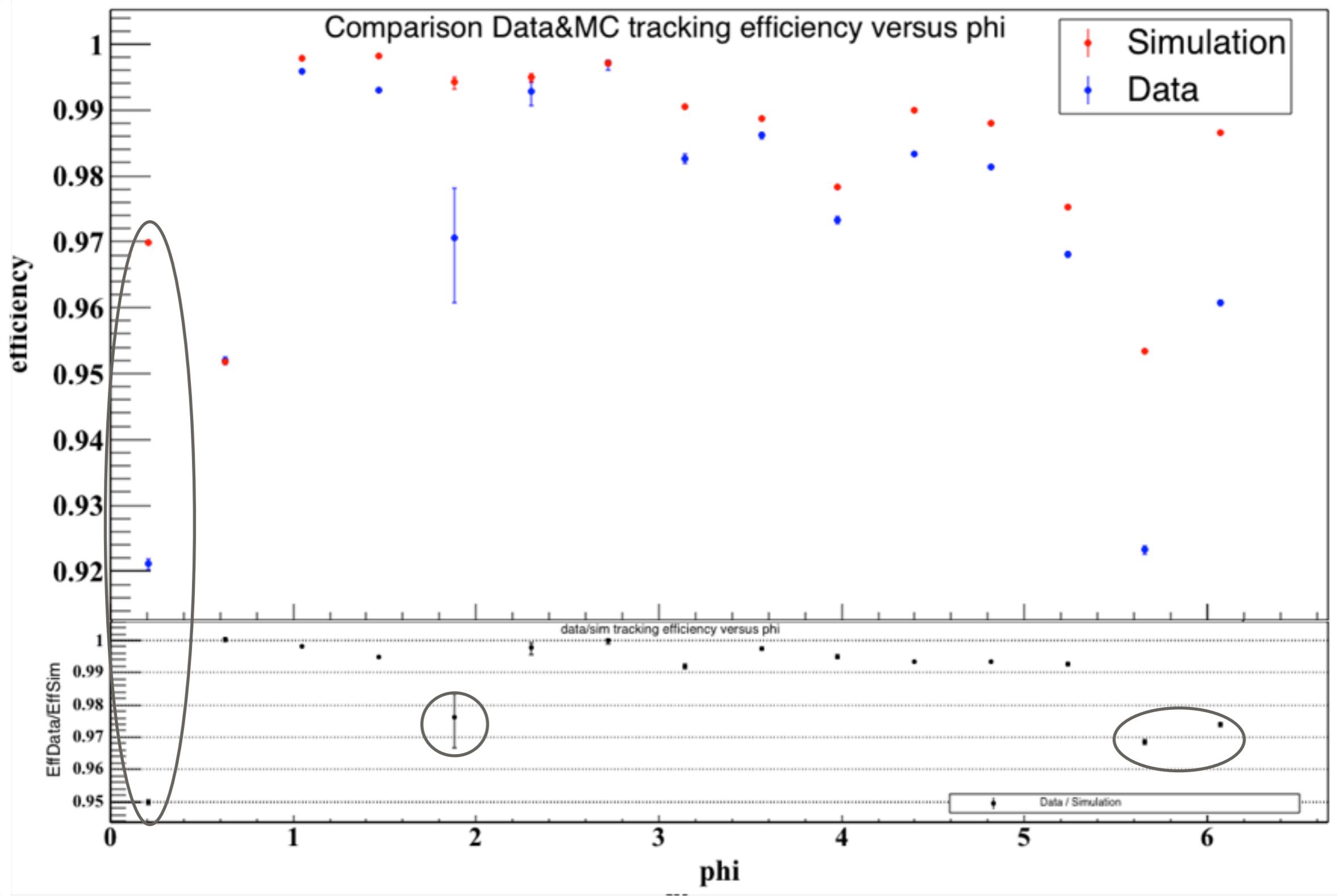
# Efficiency vs rapidity



# Efficiency vs $p_T$

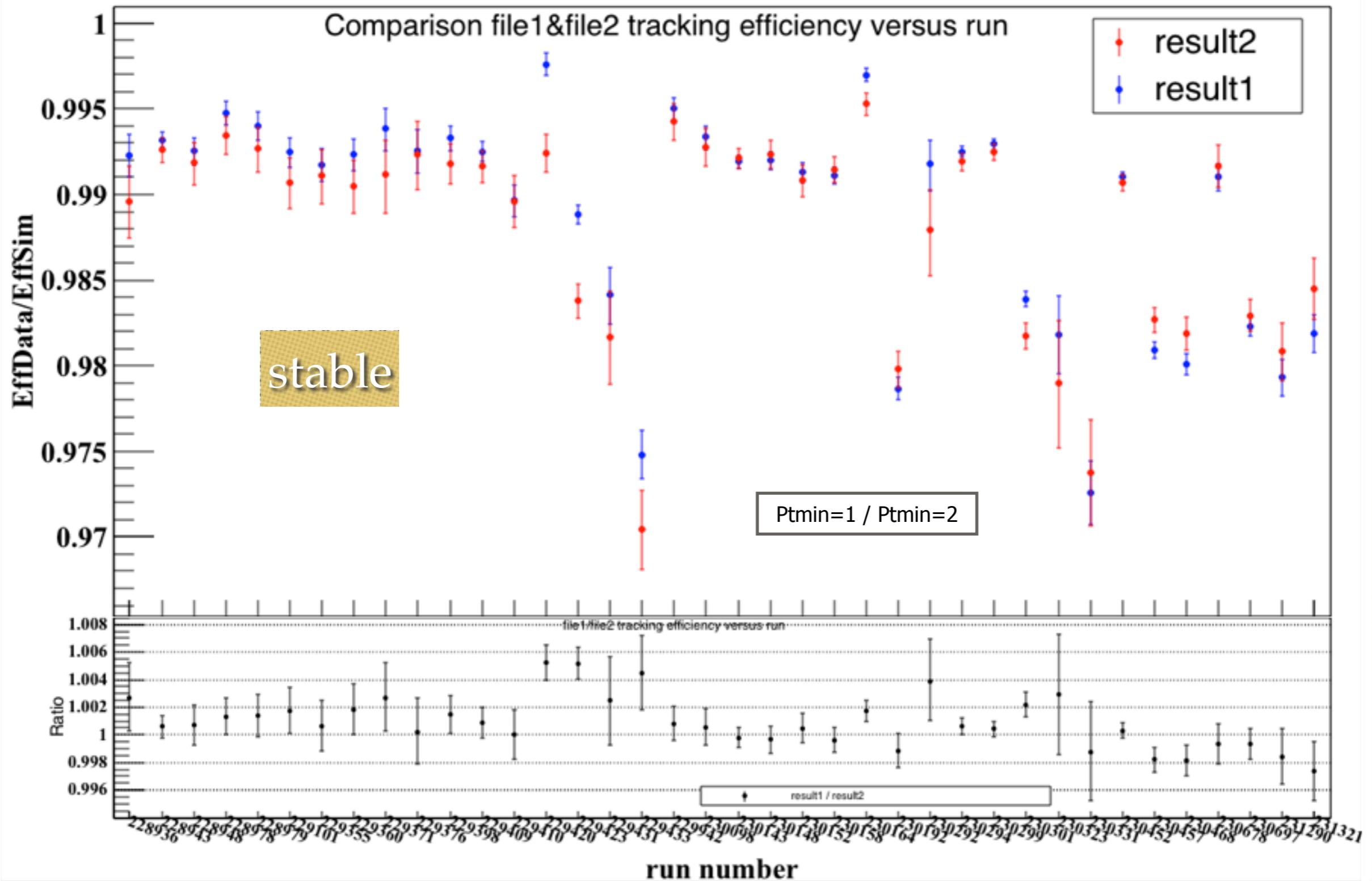


# Efficiency vs phi

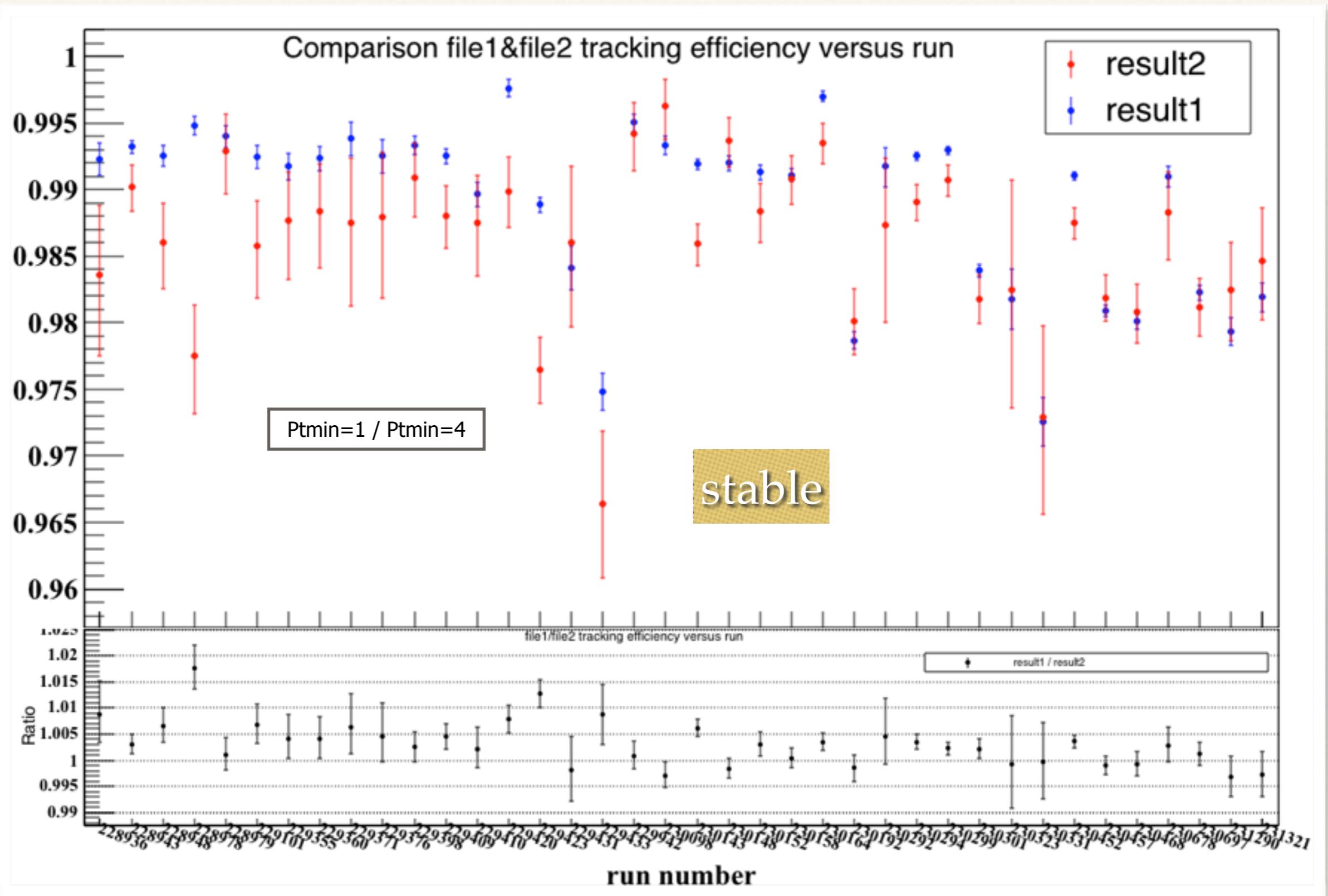


CMUL results with various Pt min

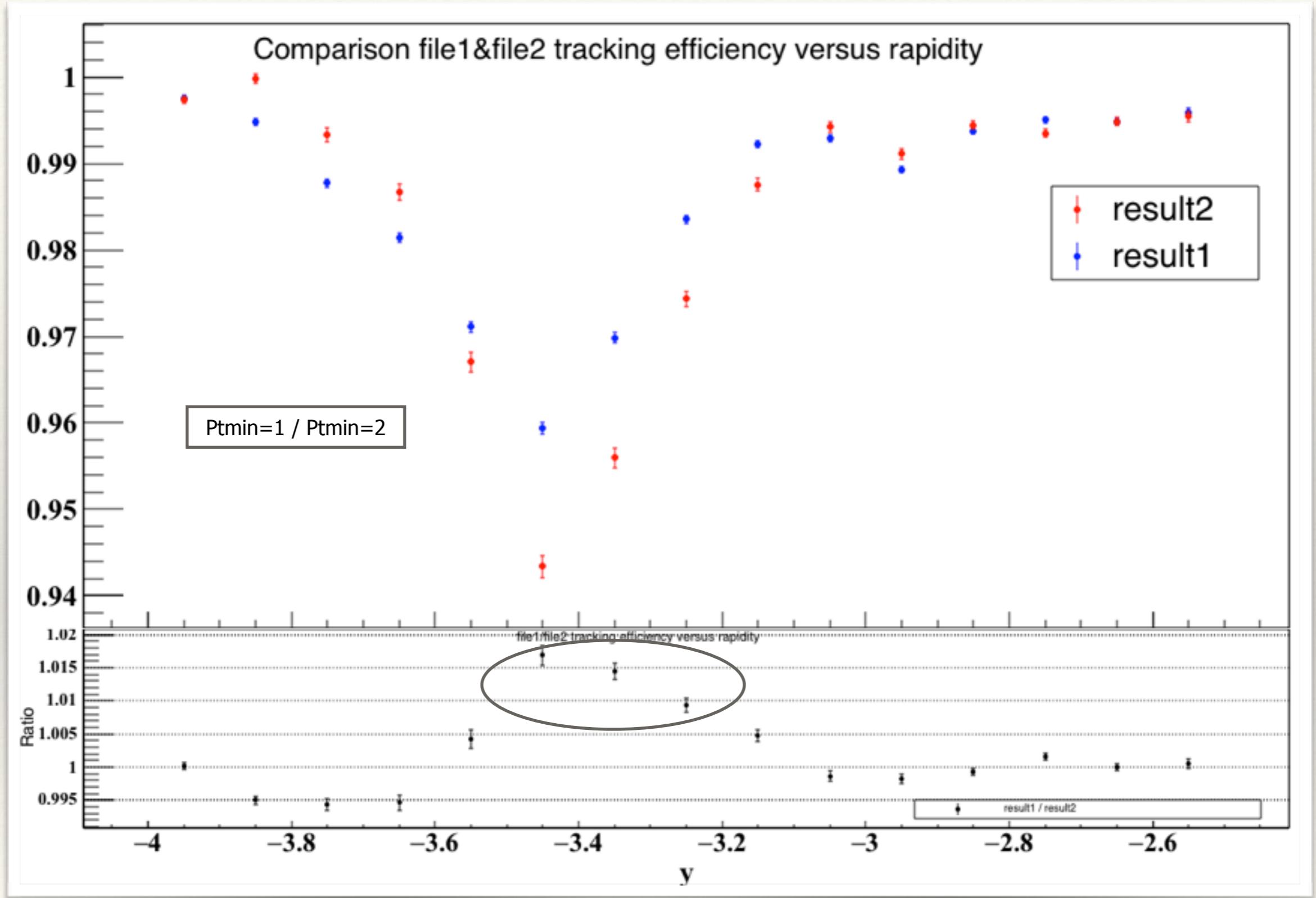
## Efficiency versus Run



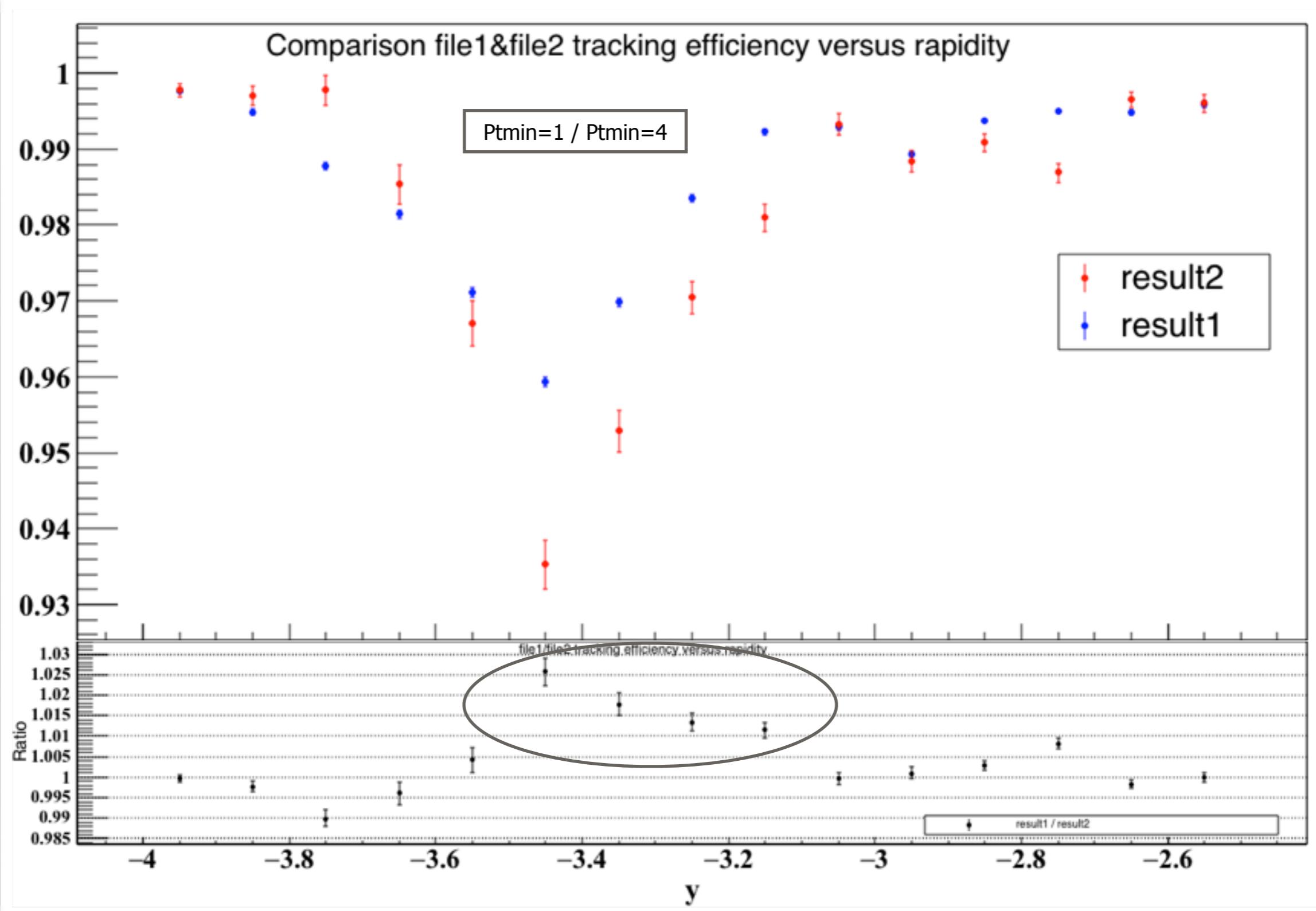
# Efficiency versus Run



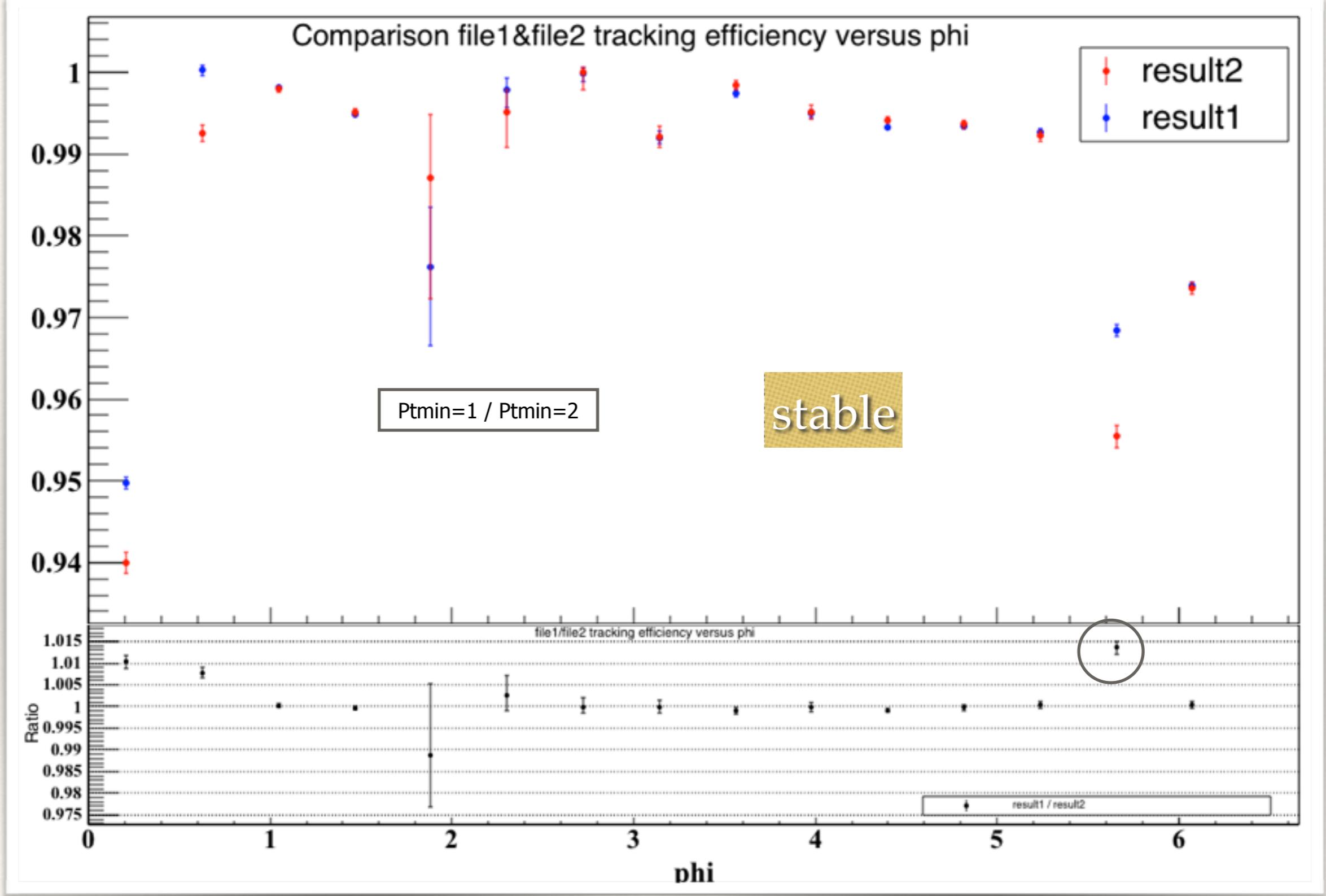
# Efficiency versus Rapidity



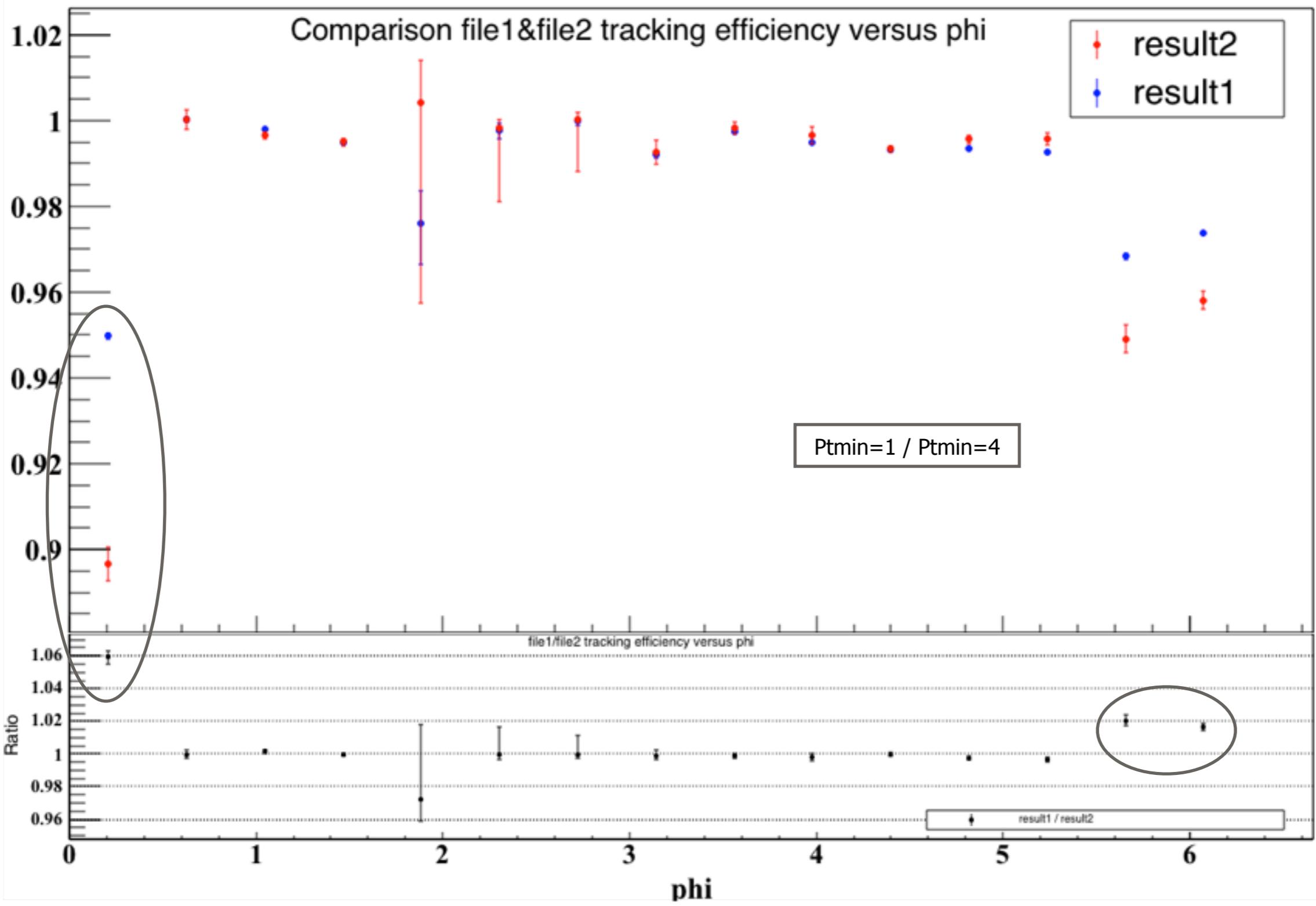
# Efficiency versus Rapidity



# Efficiency versus Phi

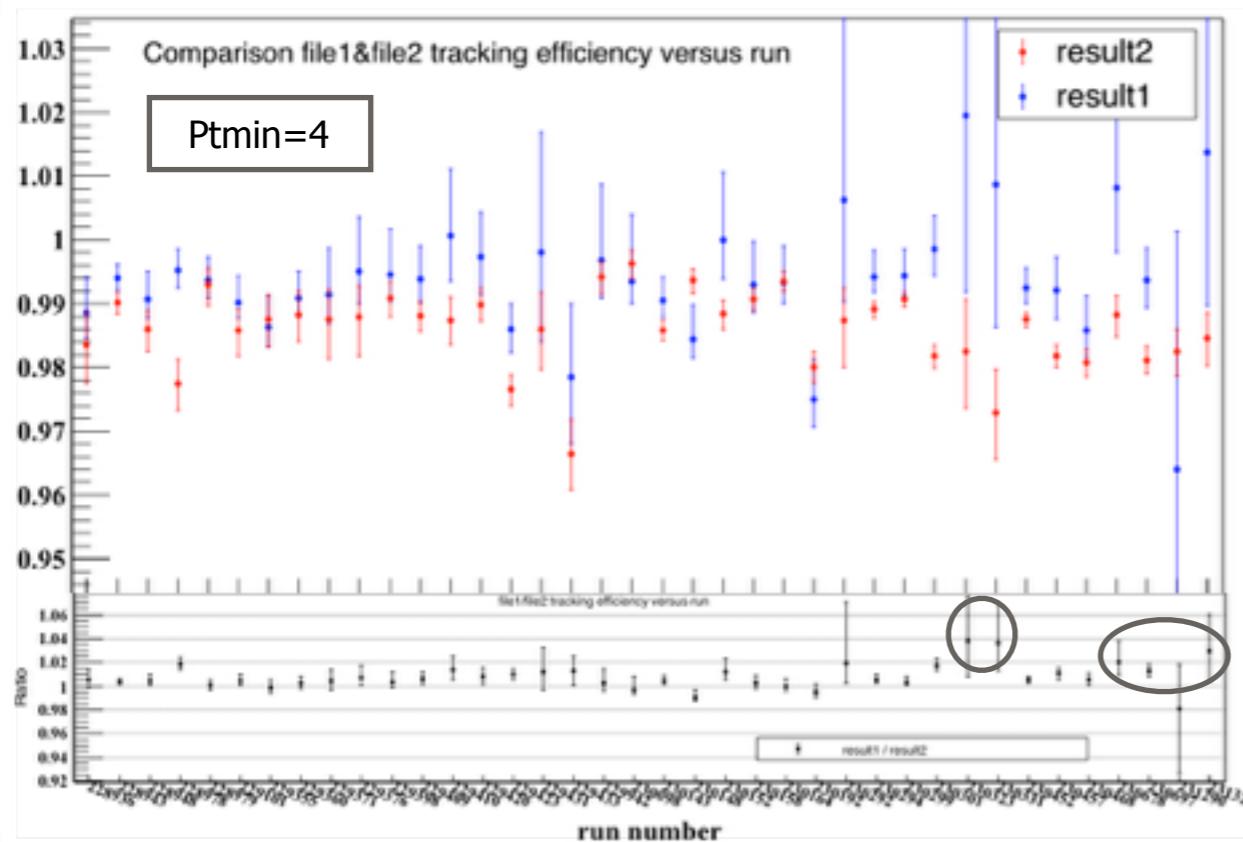
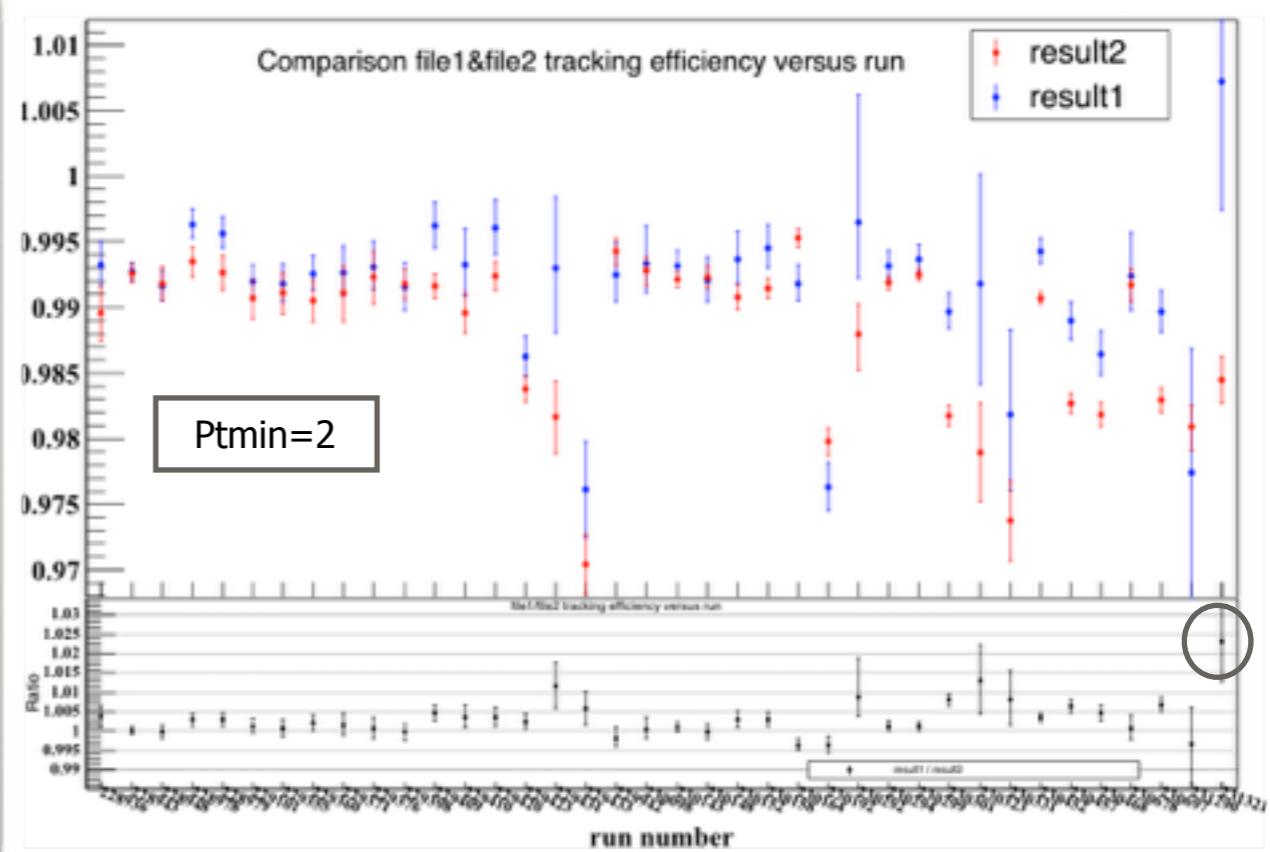
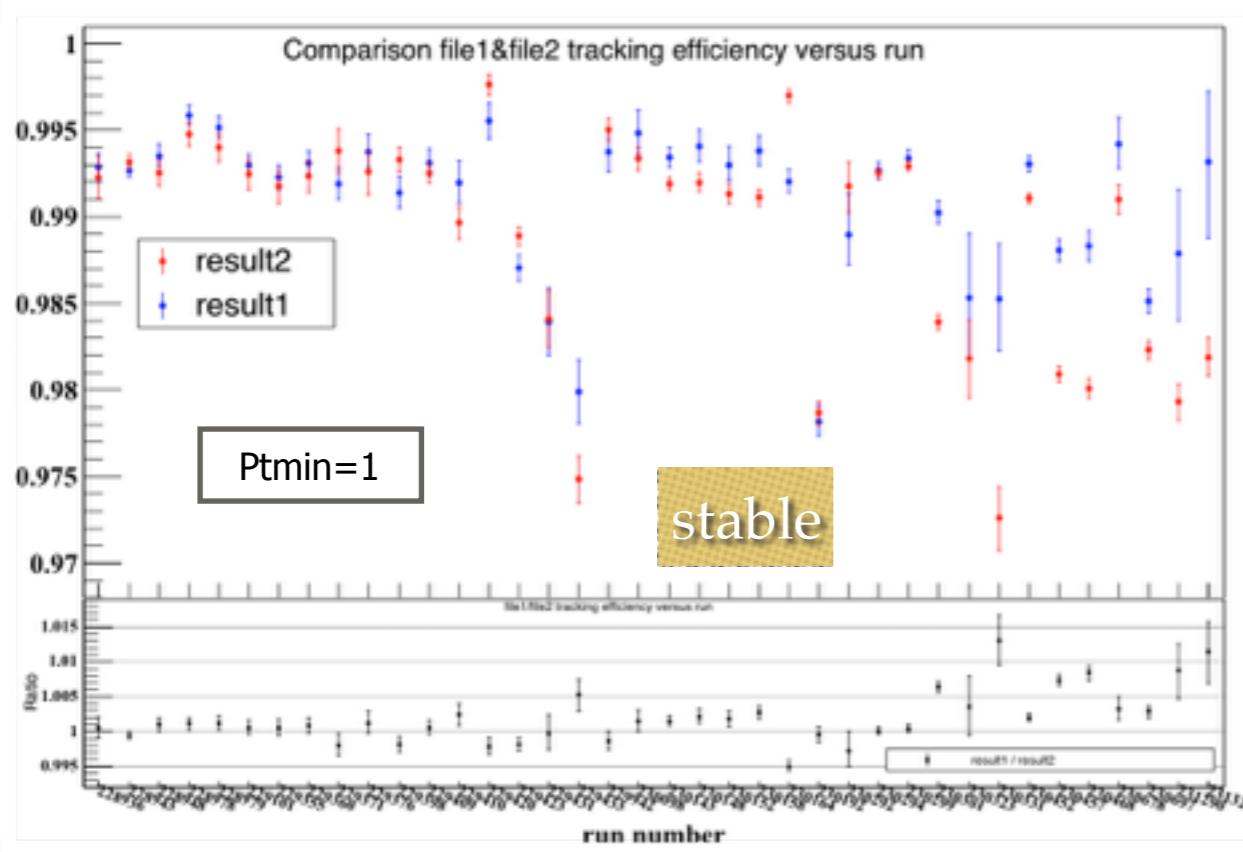


# Efficiency versus Phi



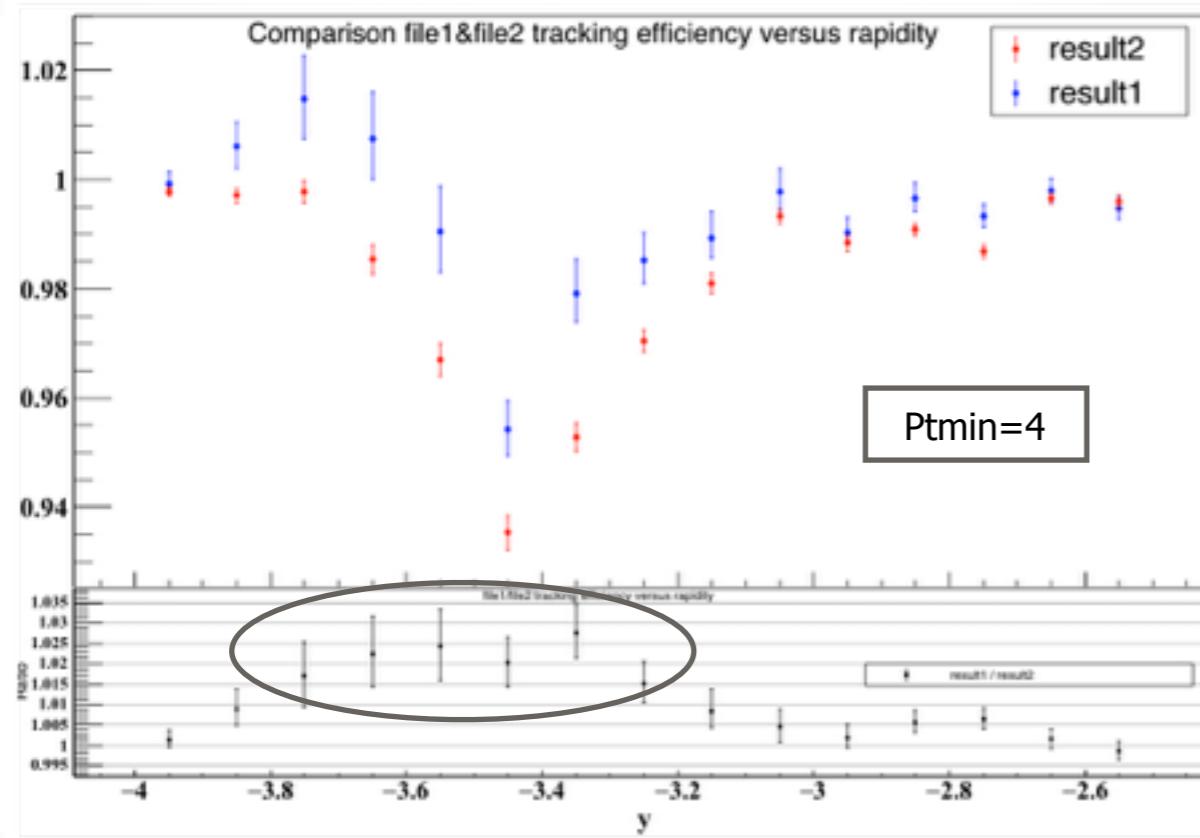
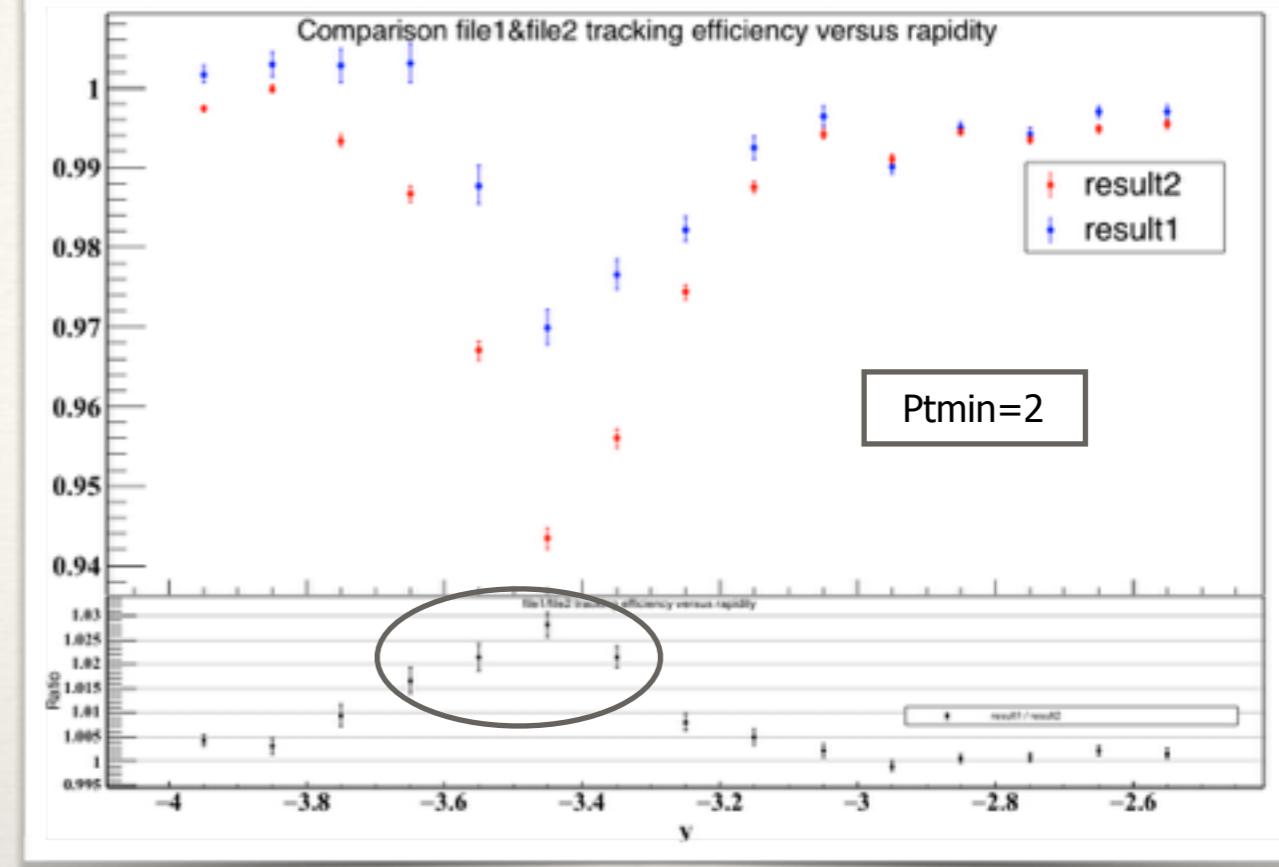
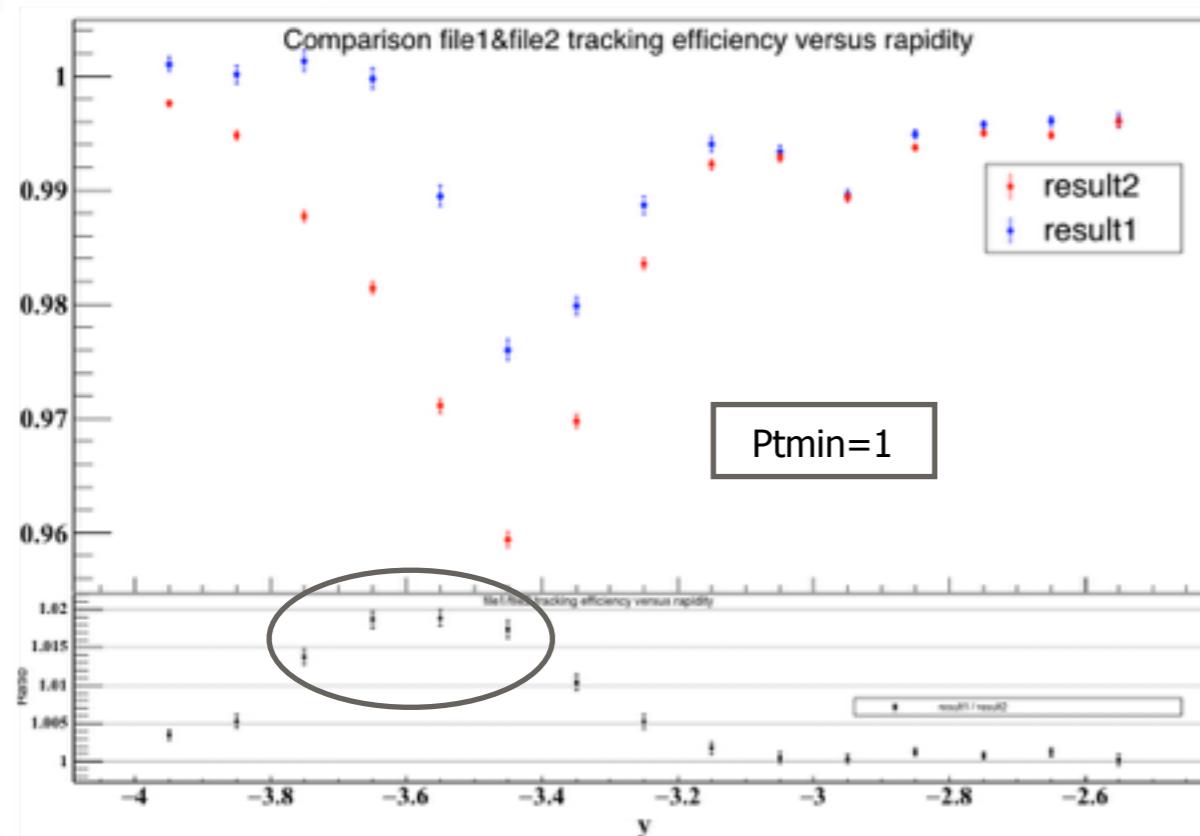
# CMSL vs CMUL

# CMSL (result1) vs CMUL (result2) over runs



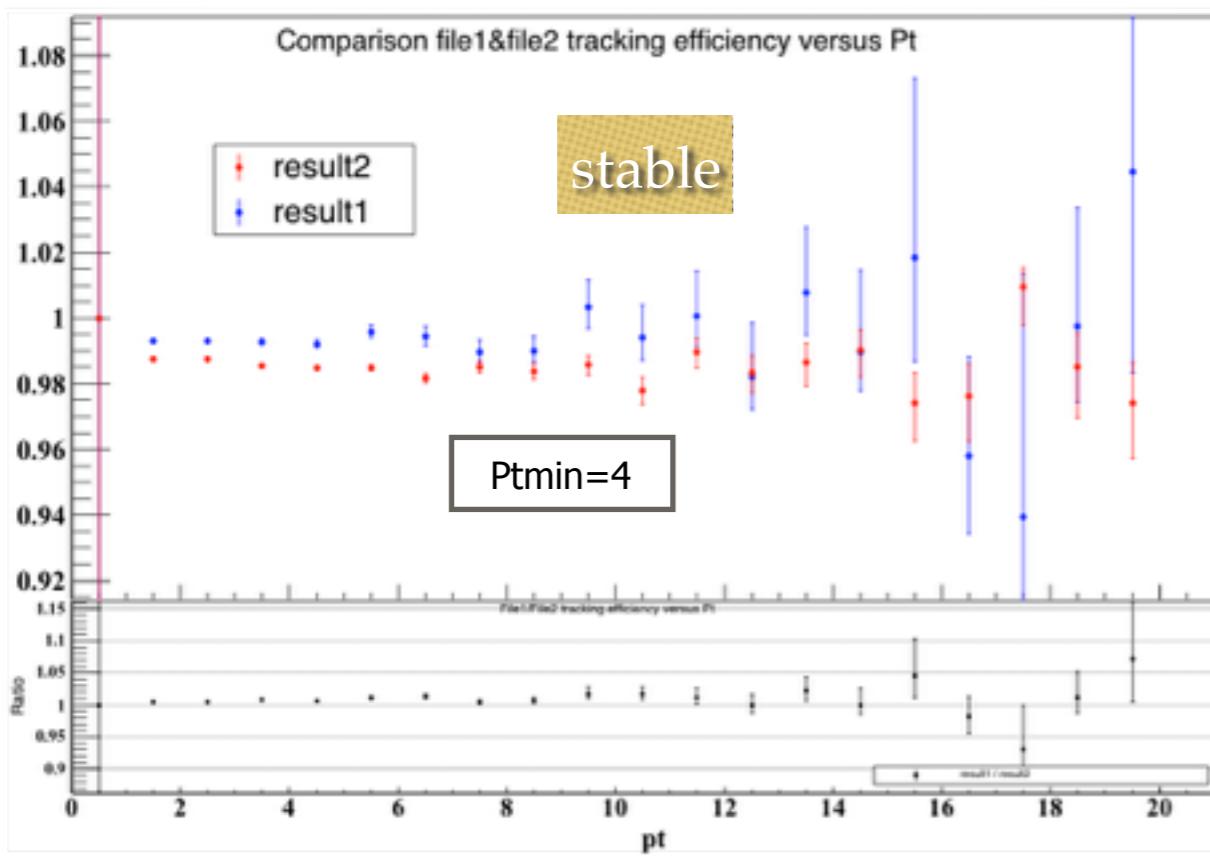
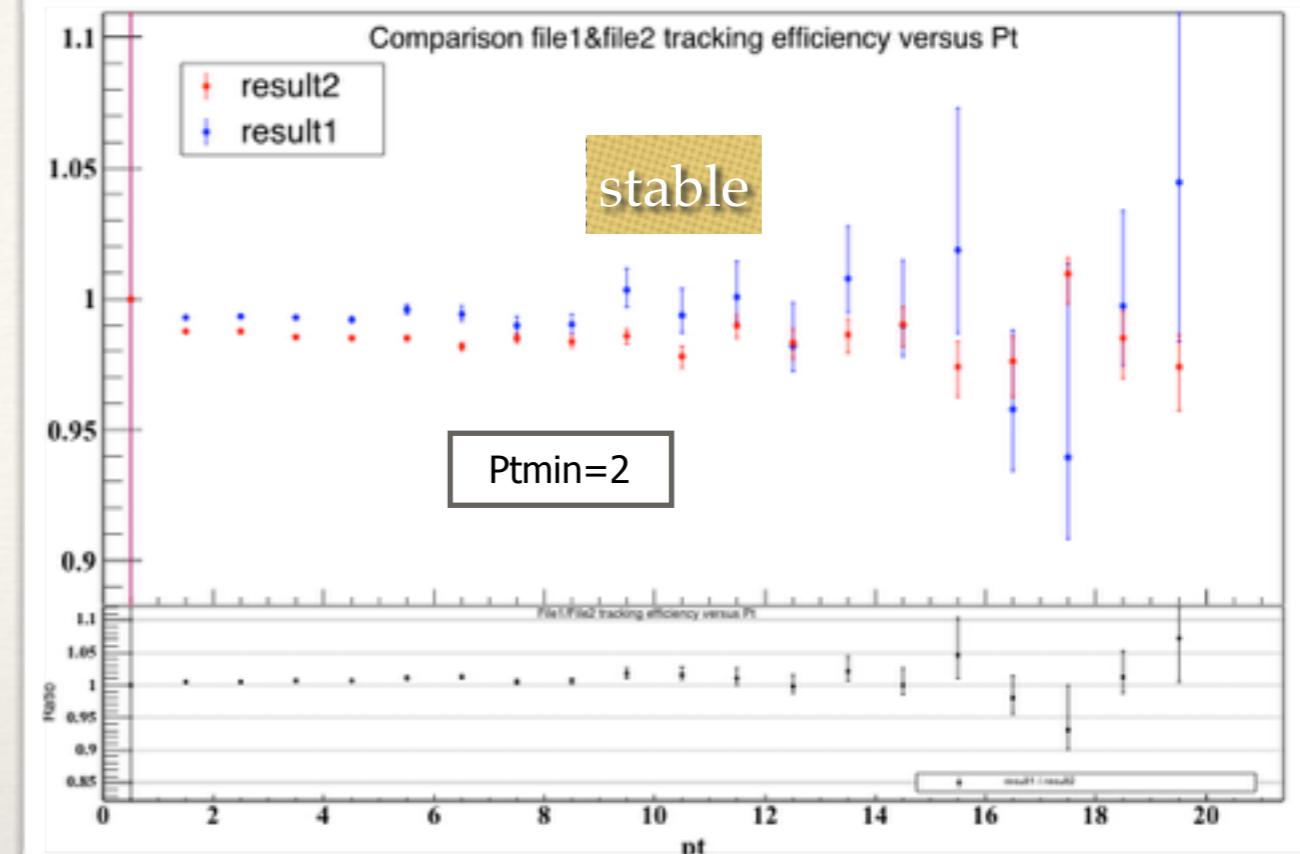
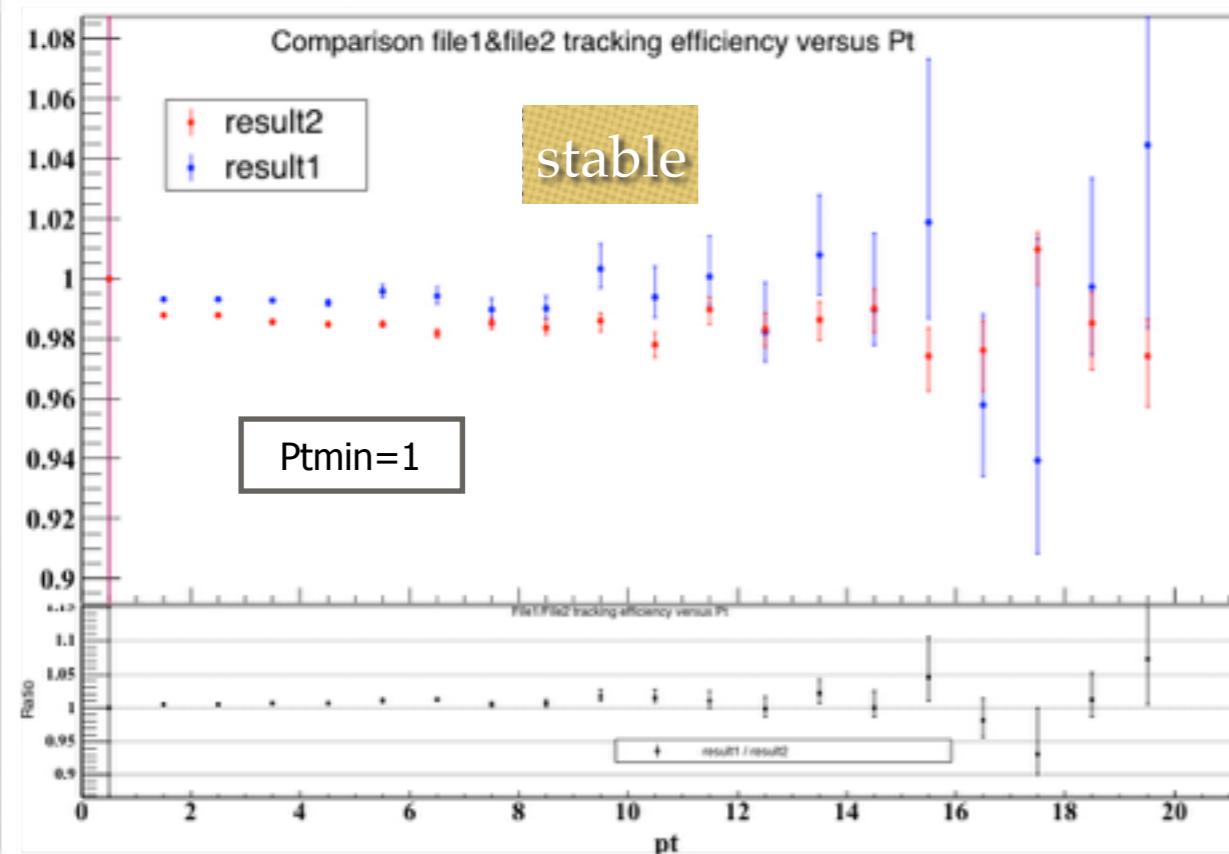
- ❖ Ratios increase :
- ❖ For end of the period for all cut in  $p_T$  but is stable
- ❖ when we increase  $p_T\text{min}$

# CMSL (result1) vs CMUL (result2) over rapidity



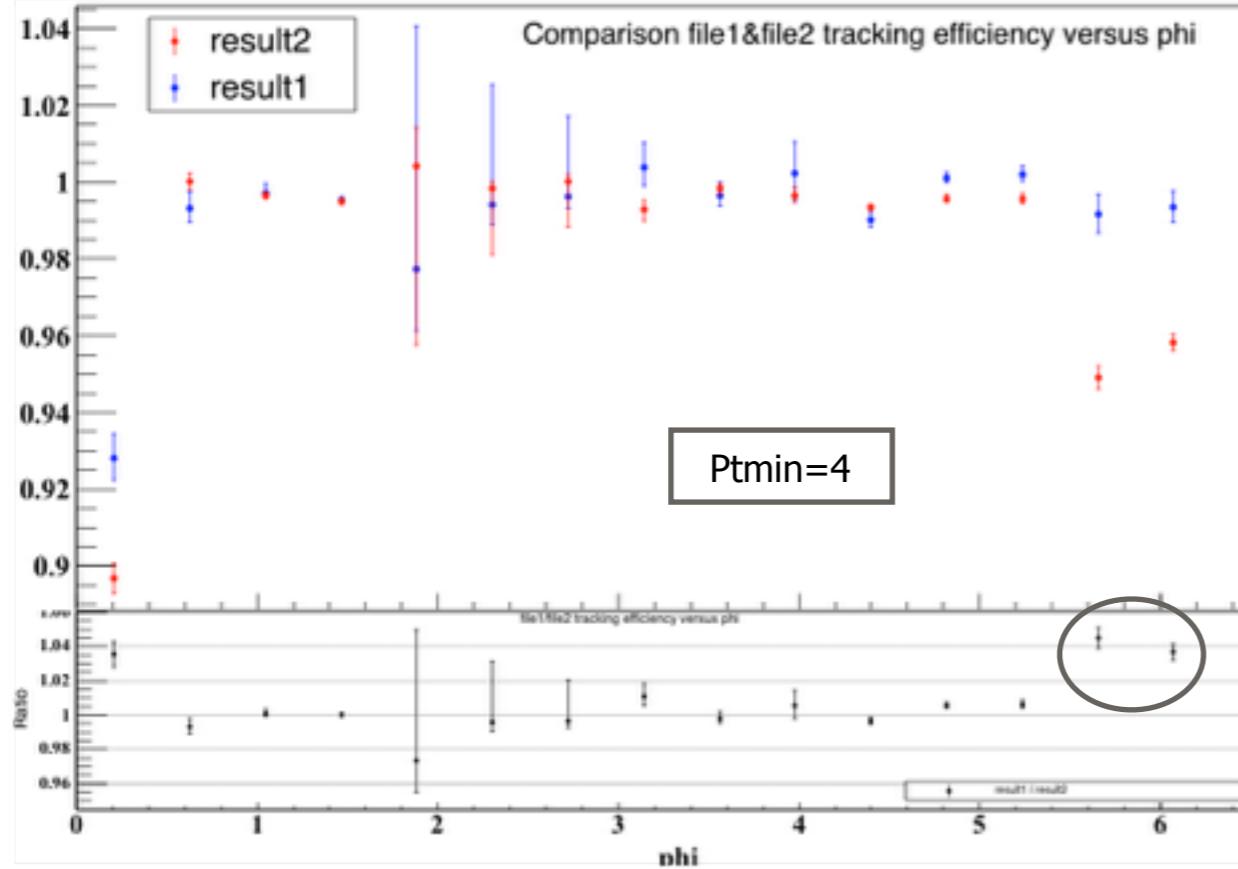
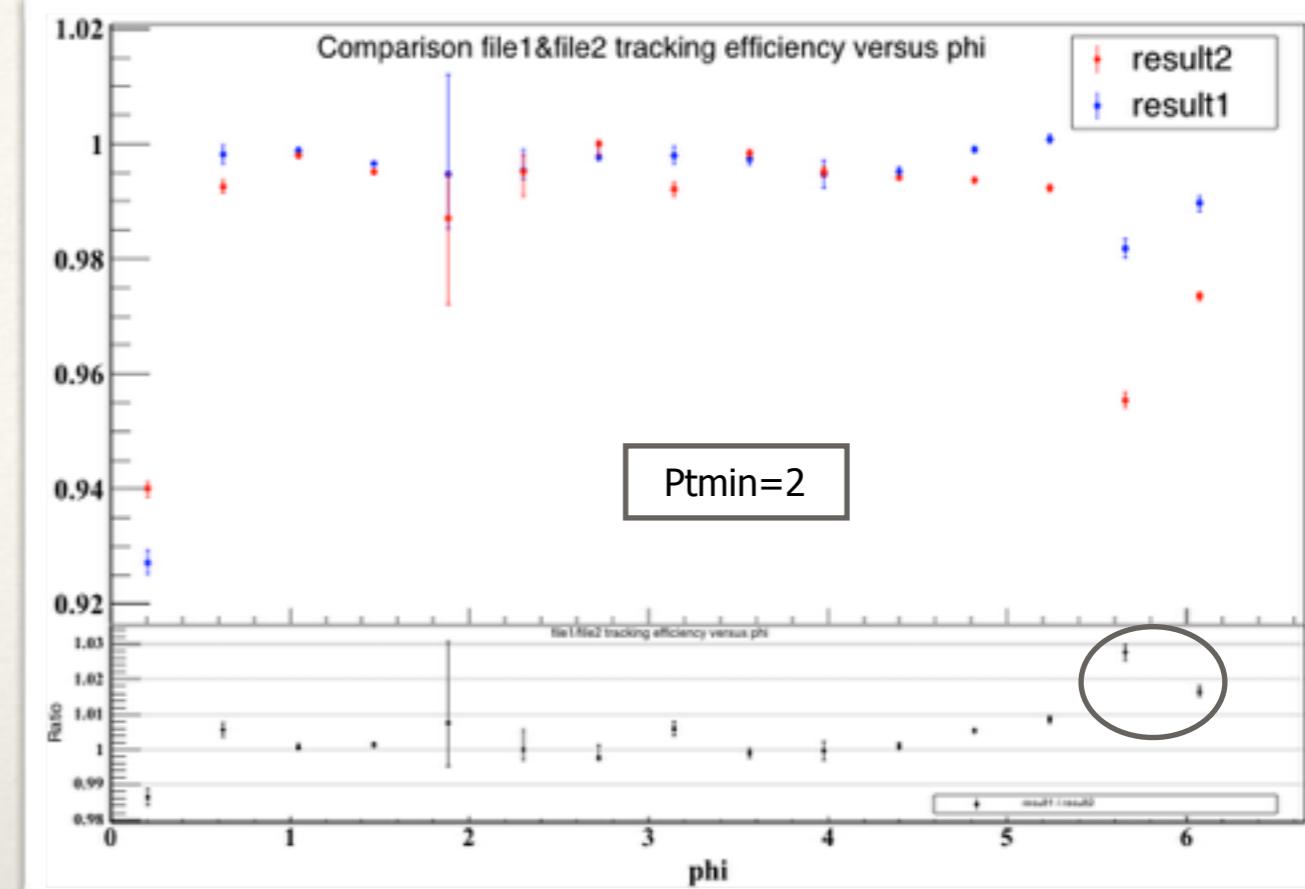
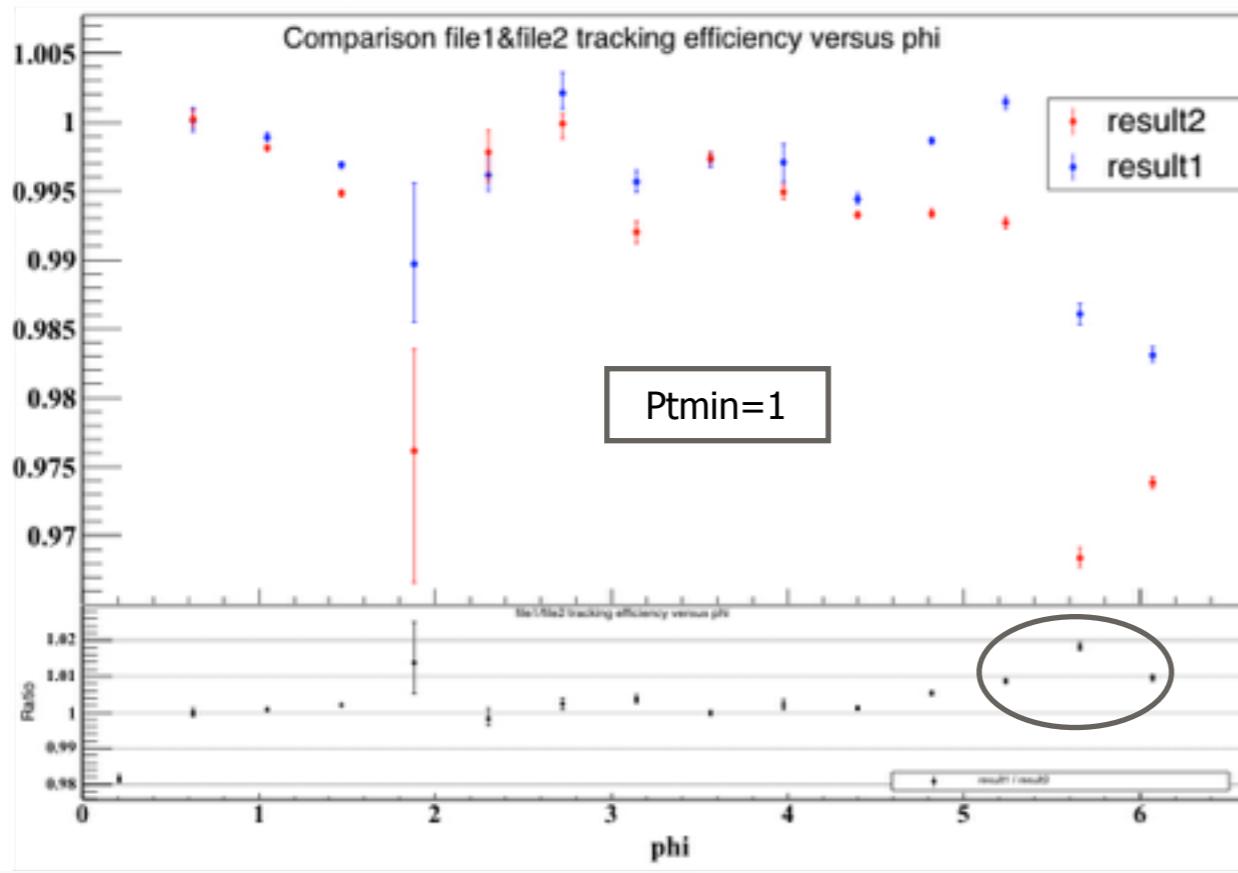
- ❖ Ratios increase in the same y range and with  $p_T\text{min}$
- ❖ Rapidity distribution dependance (?)

# CMSL (result1) vs CMUL (result2) over $p_T$



- ❖ Same plots -> Good crosscheck for the code

# CMSL (result1) vs CMUL (result2) over phi



- ❖ Again, ratios increase with  $p_T\text{min}$  in the same region -> Distribution dependance (?)

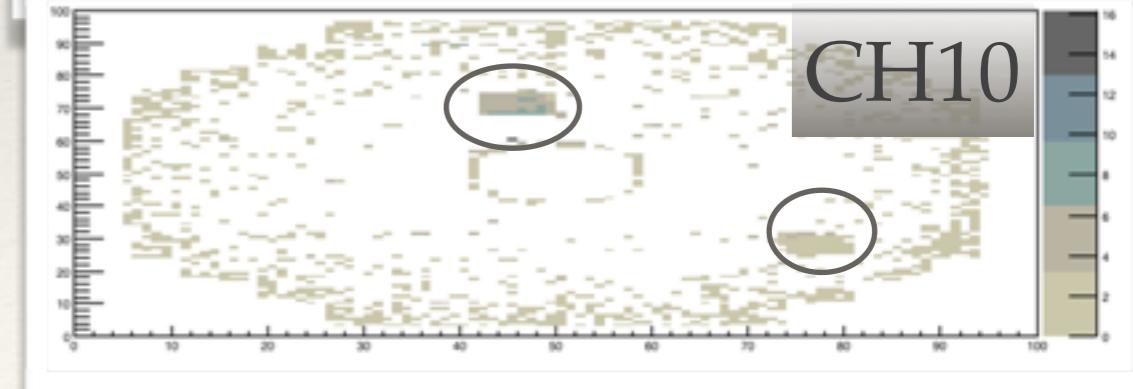
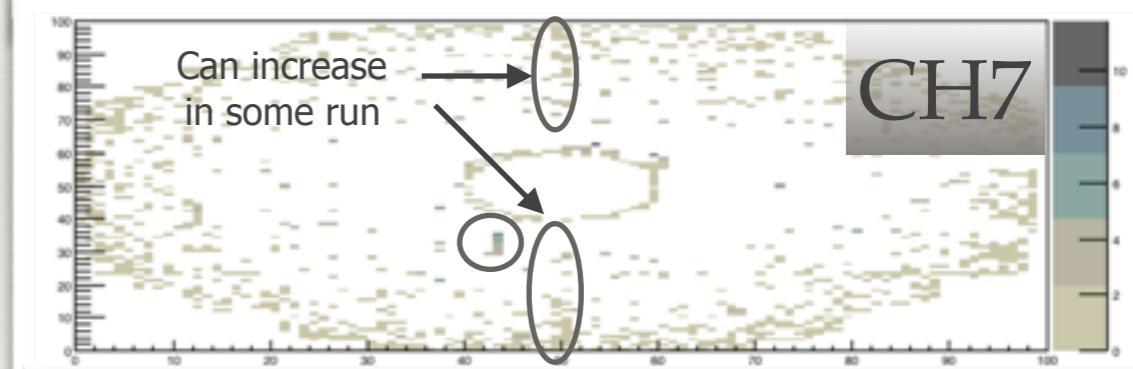
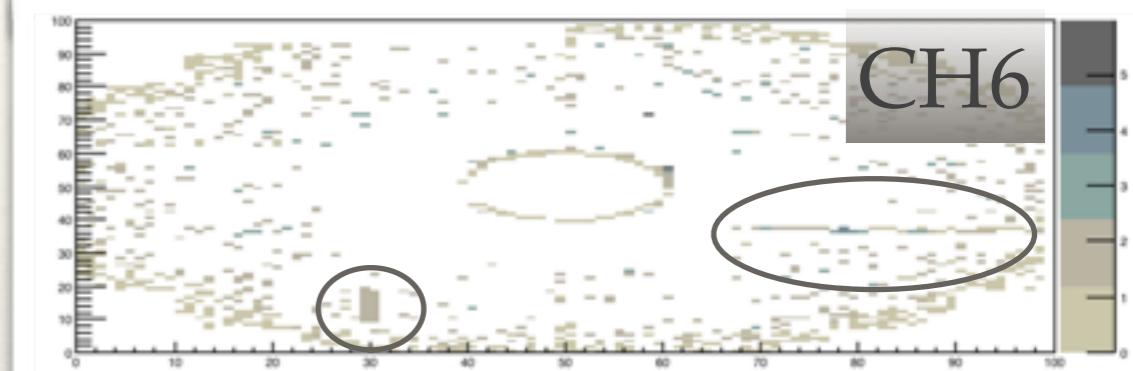
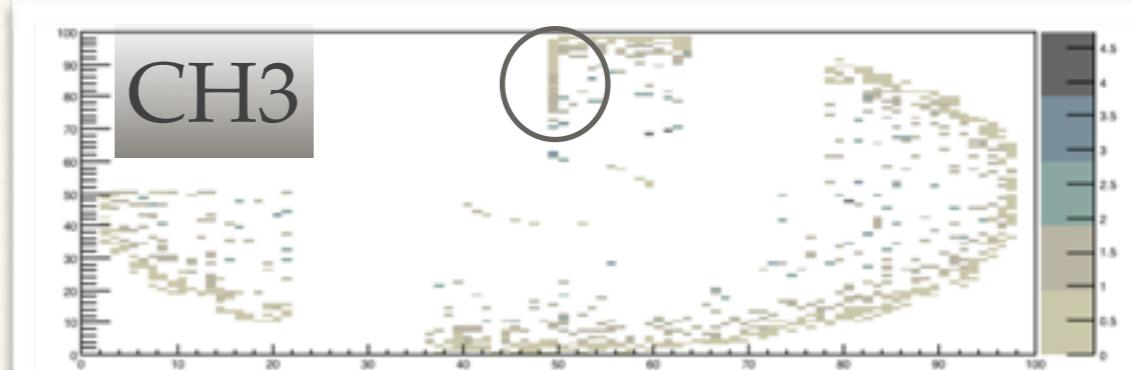
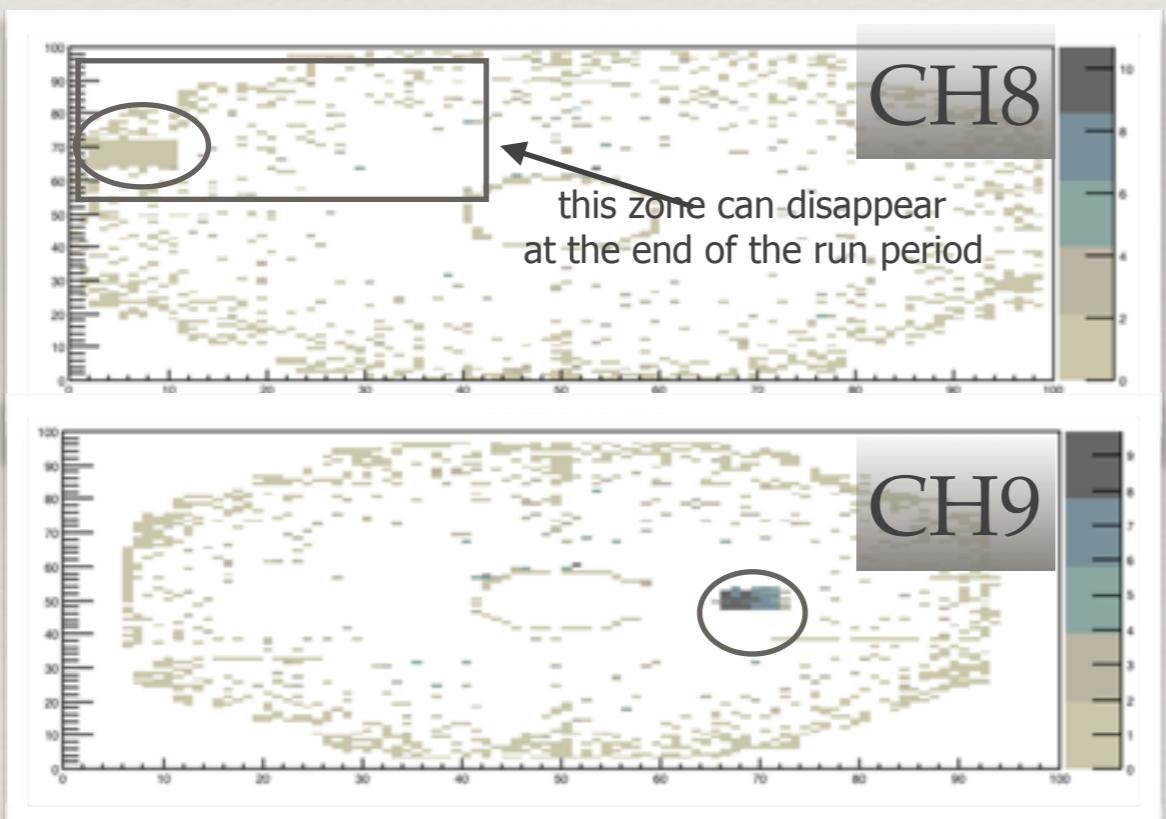
# Status Map

# Hit Map - Difference Between Data/MC

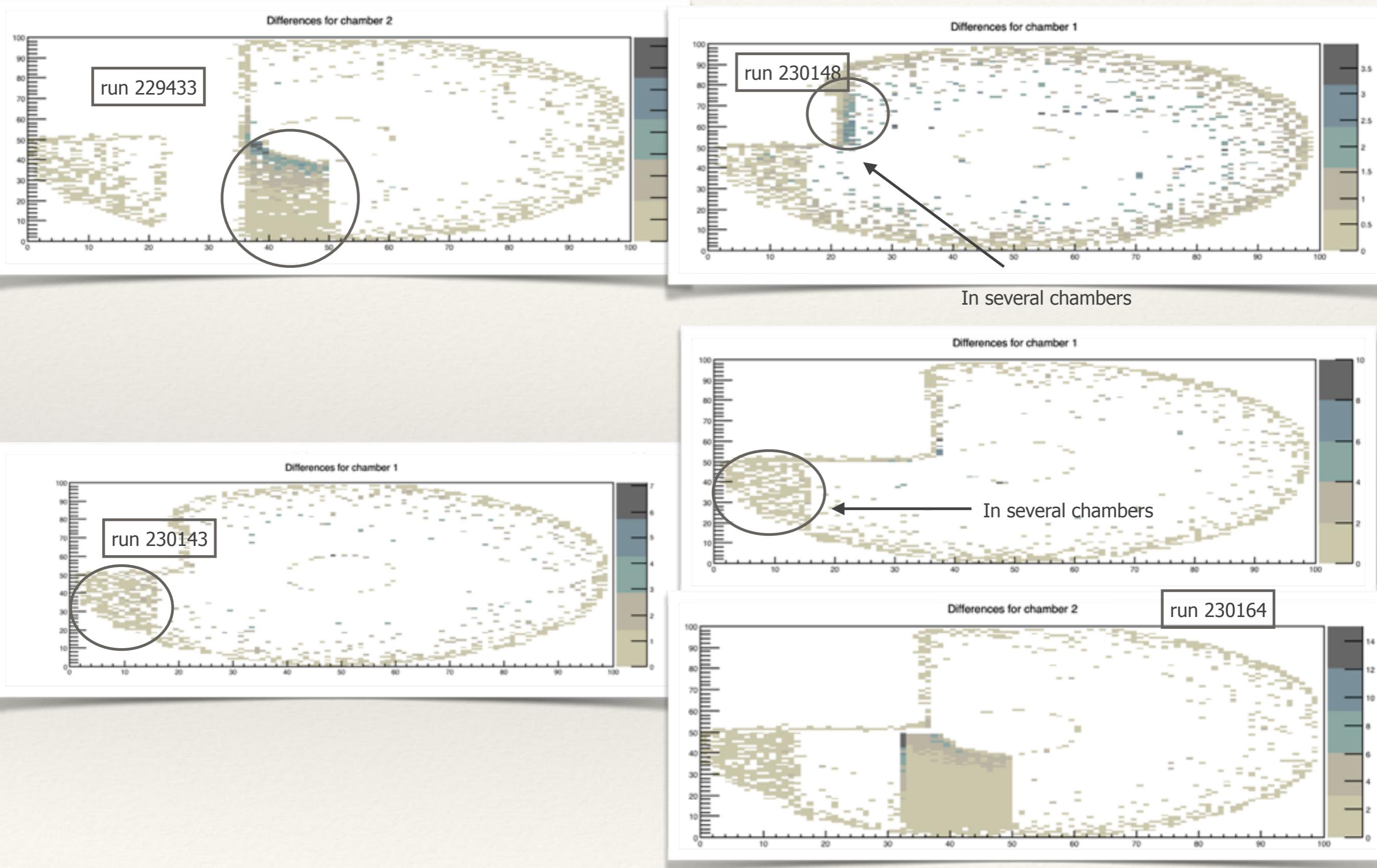
Hit Maps made from CMUL trigg. with the efficiency macro

Same errors for  
all run  
(more or less)

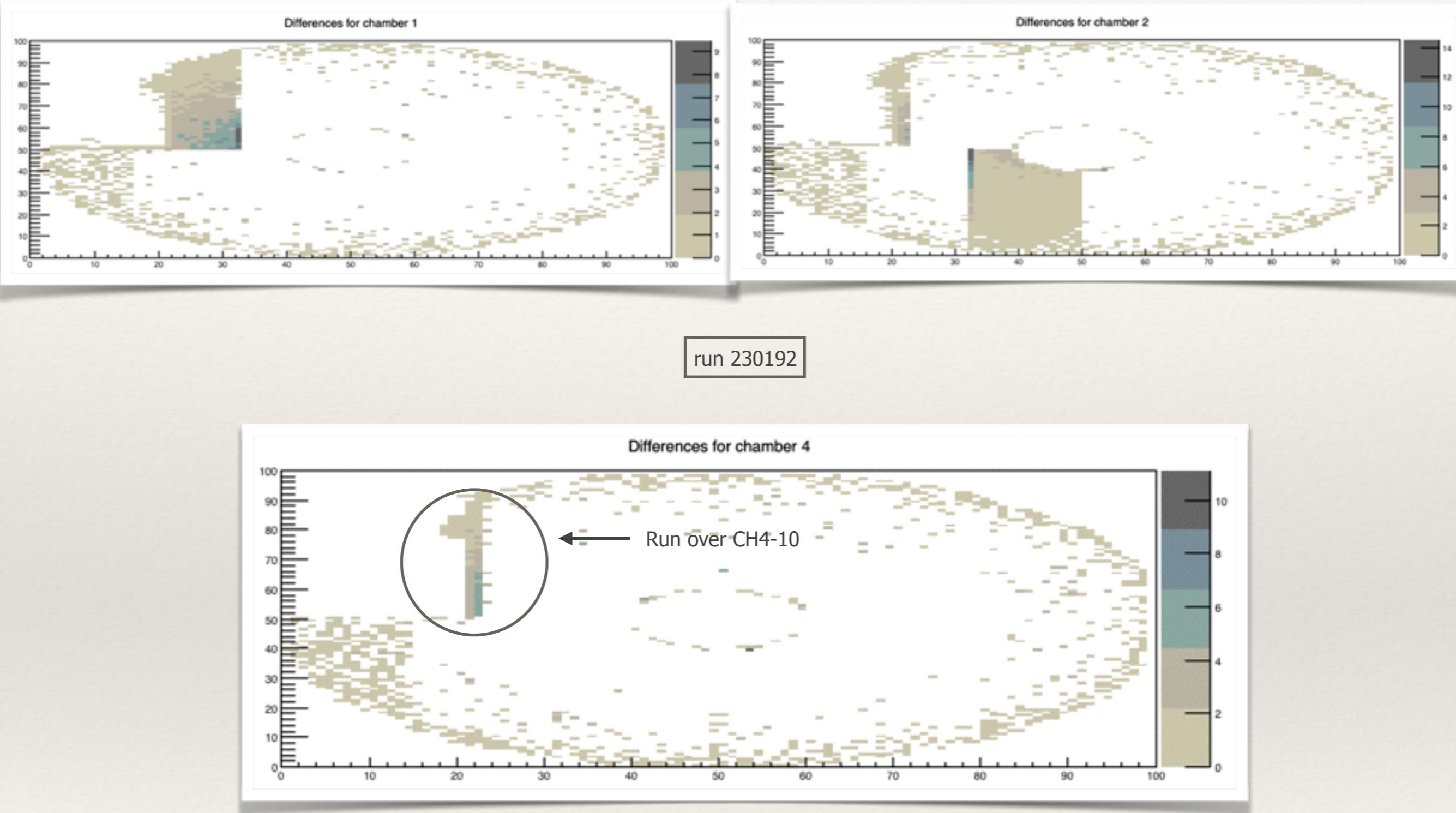
In next slide, only particular  
cases are shown



# Hit Map - Difference Between Data/MC

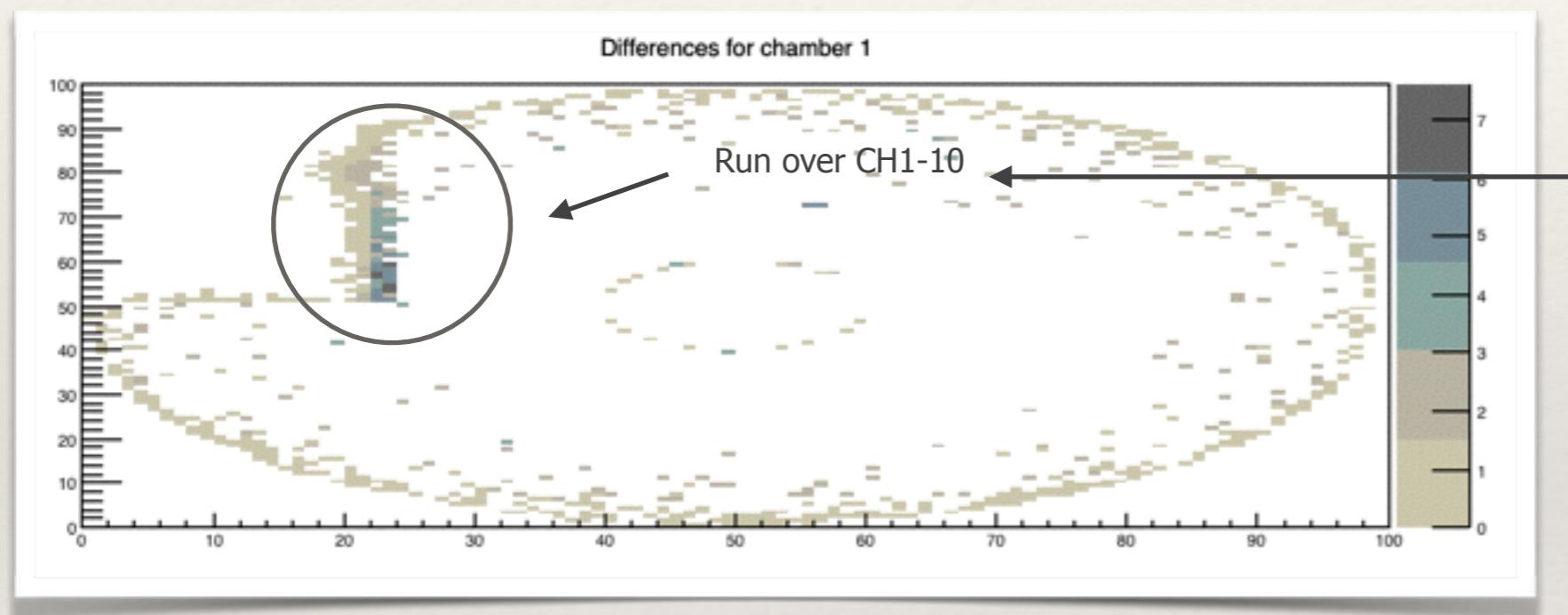


# Hit Map - Difference Between Data/MC



# Hit Map - Difference Between Data/MC

run 230299



Same for run:

-230301

-230323

-230331

-230352

-230357

-230368

-230697

-231290

-231321