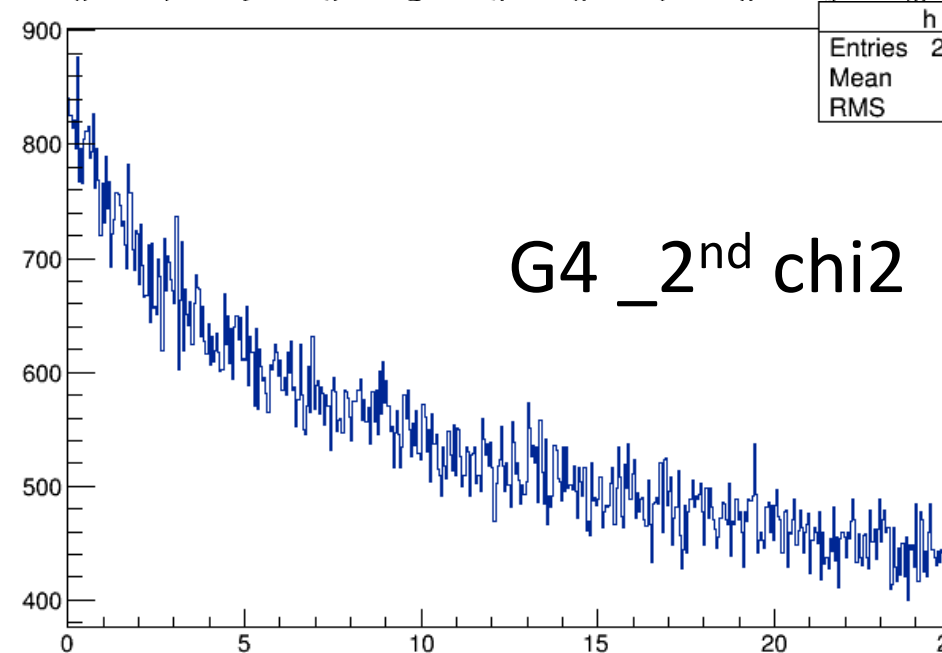
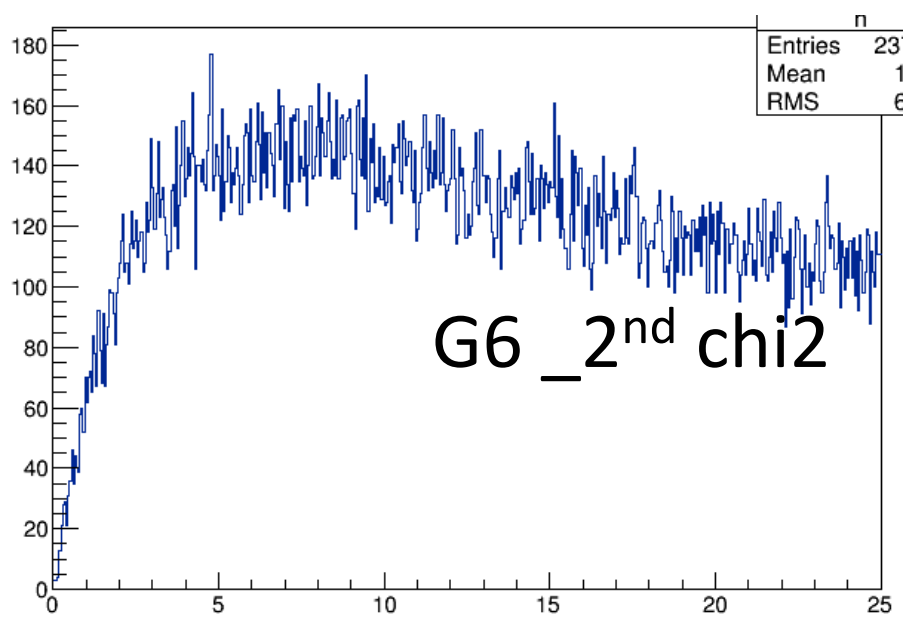
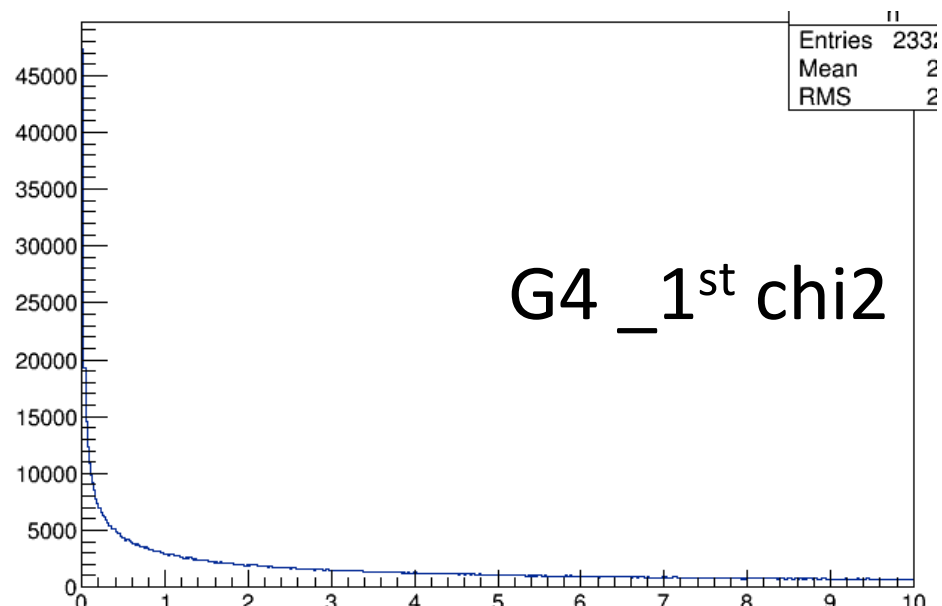
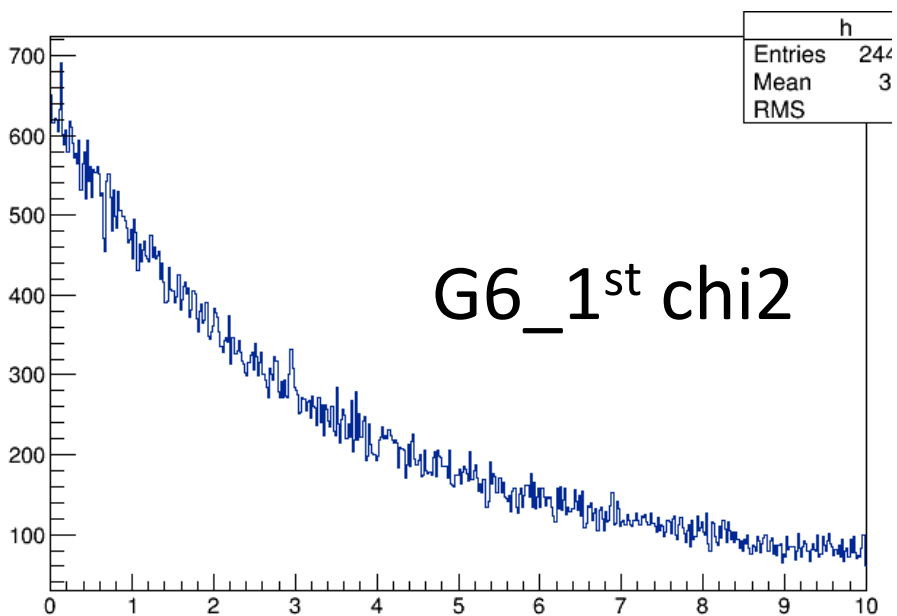
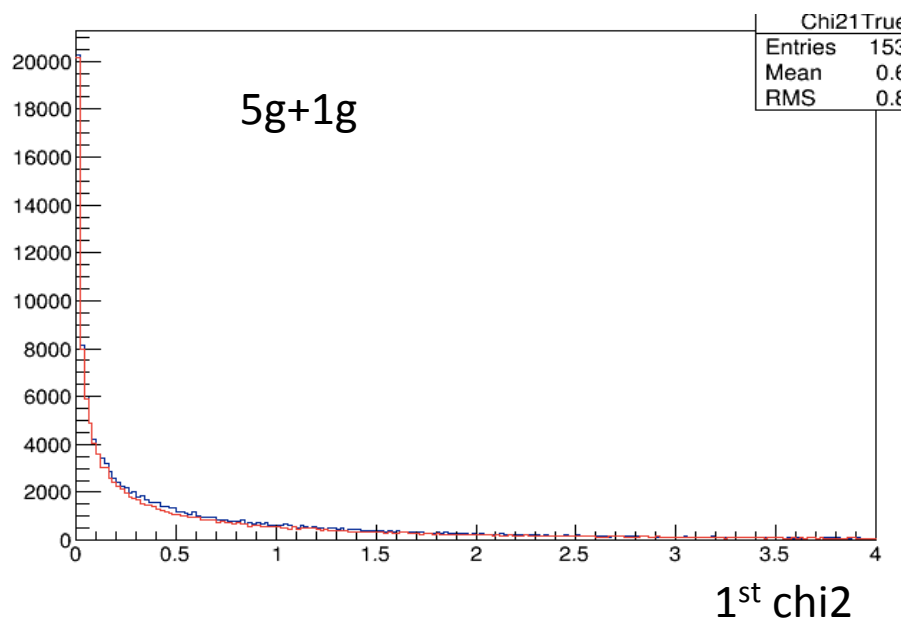
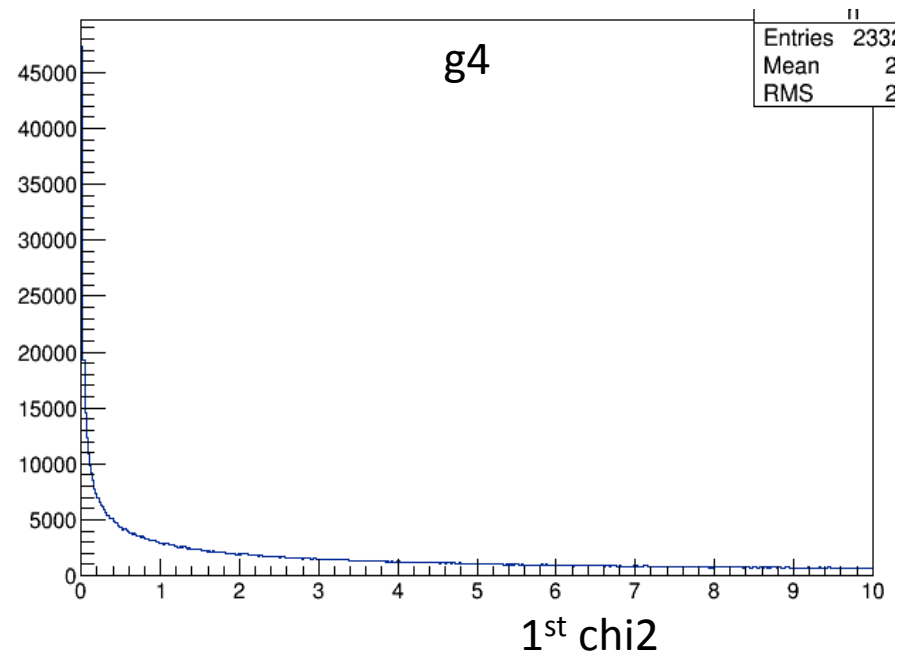
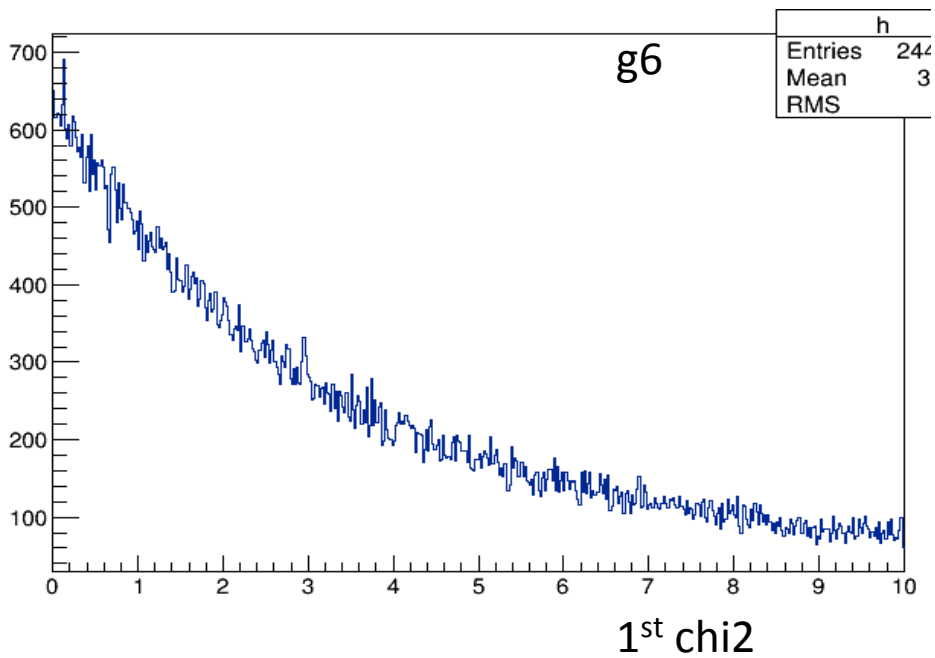


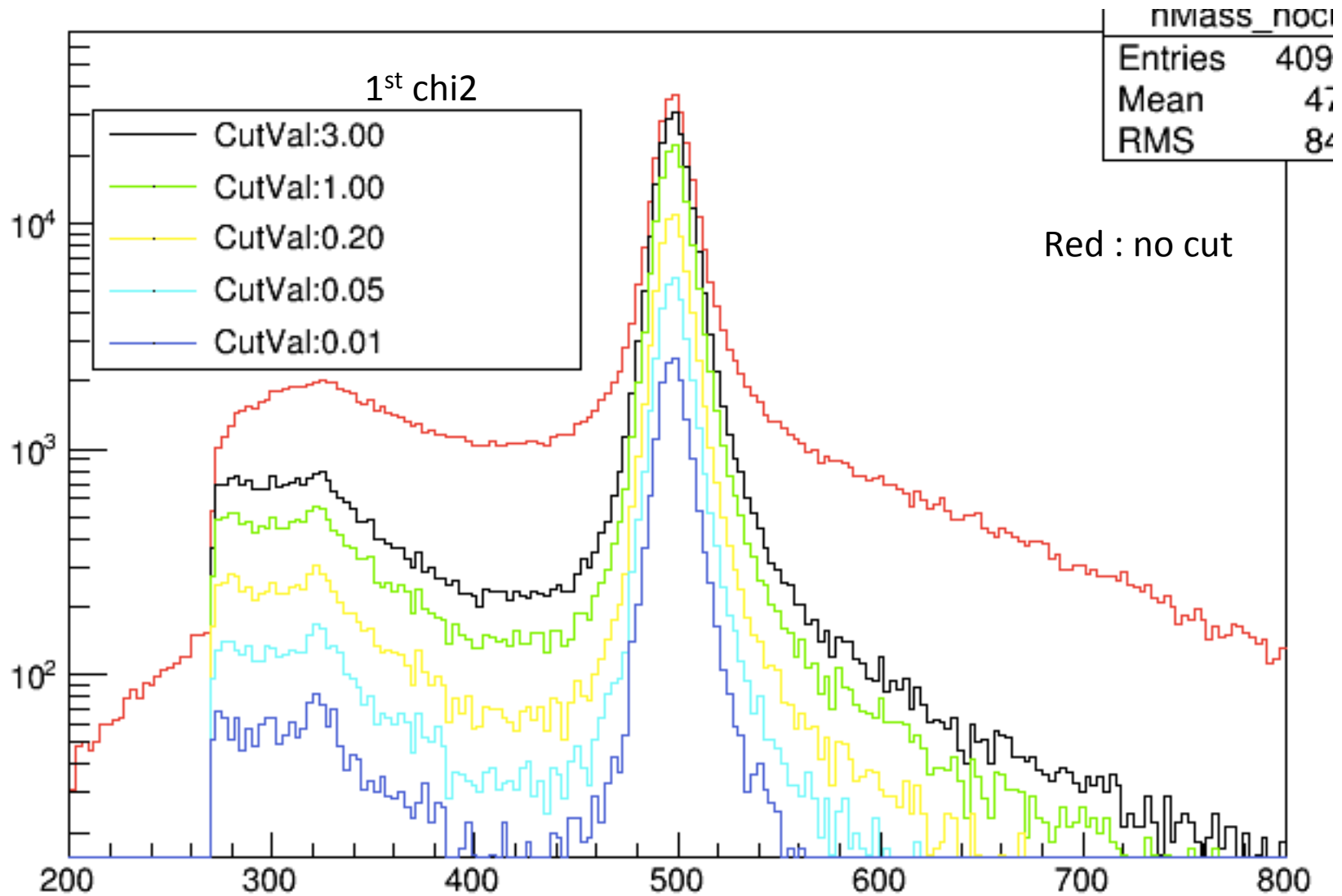
Report_161108

g4ana(default), g6ana chi2 check



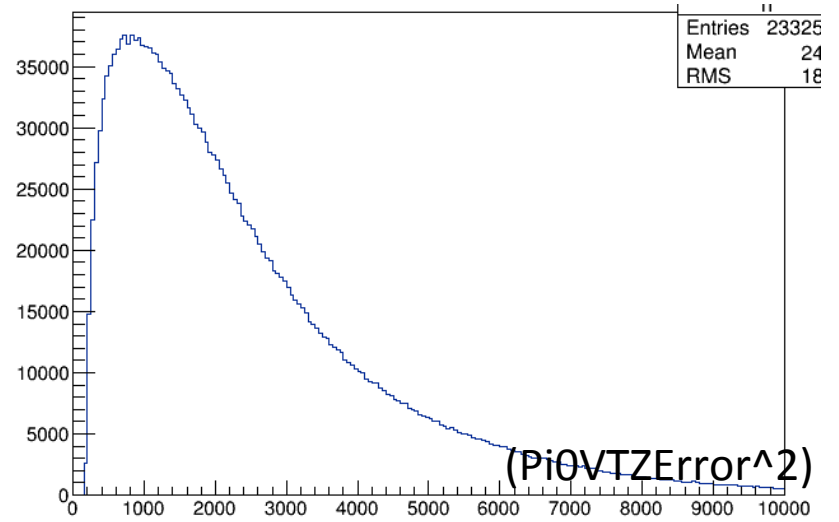
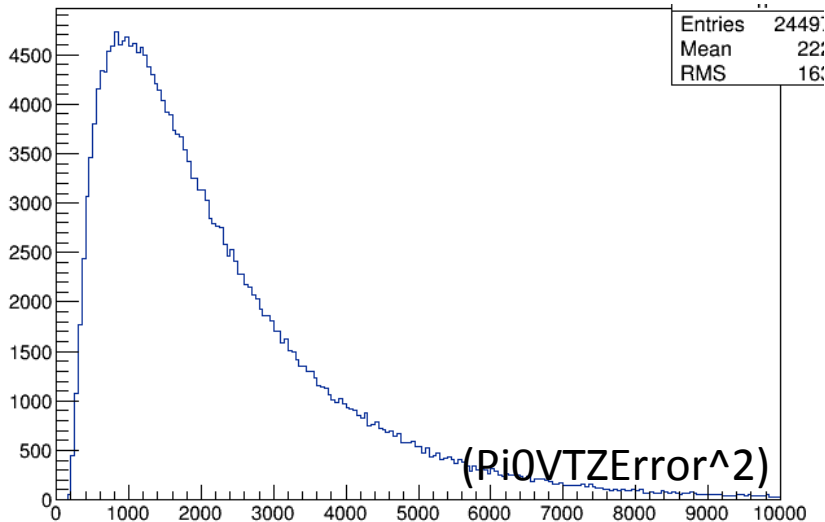
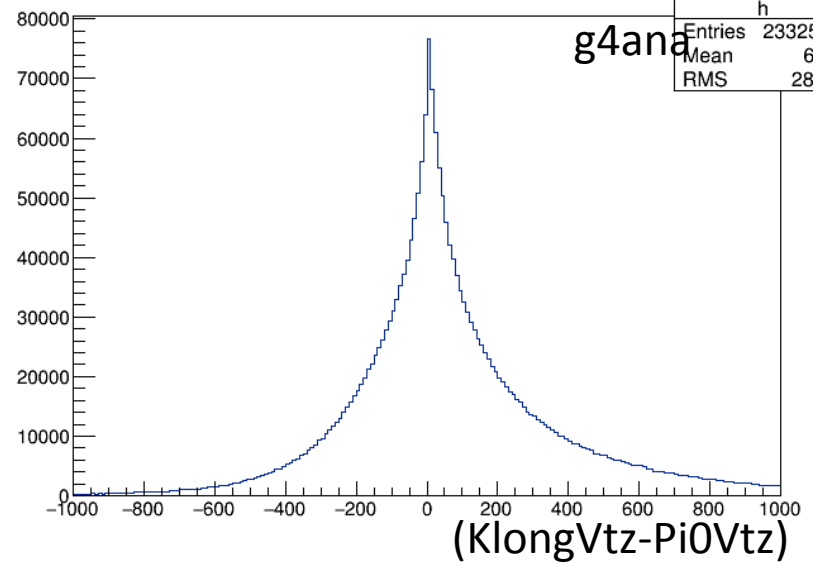
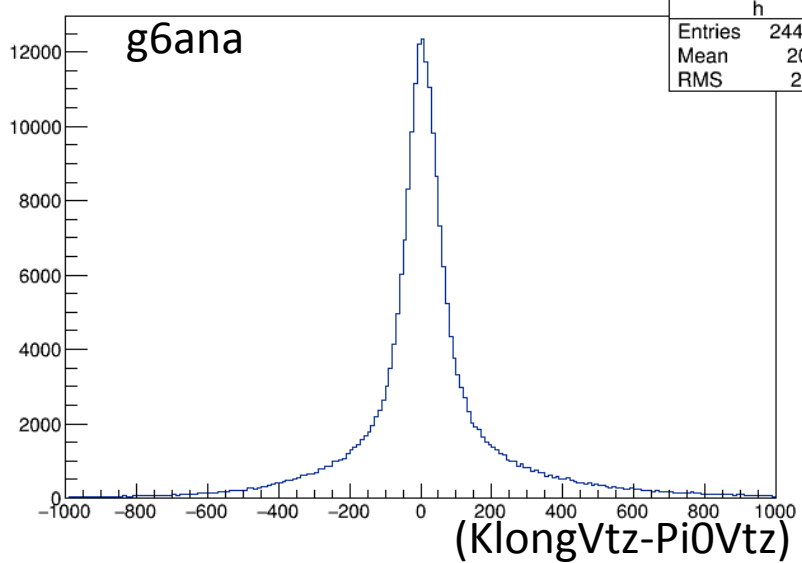


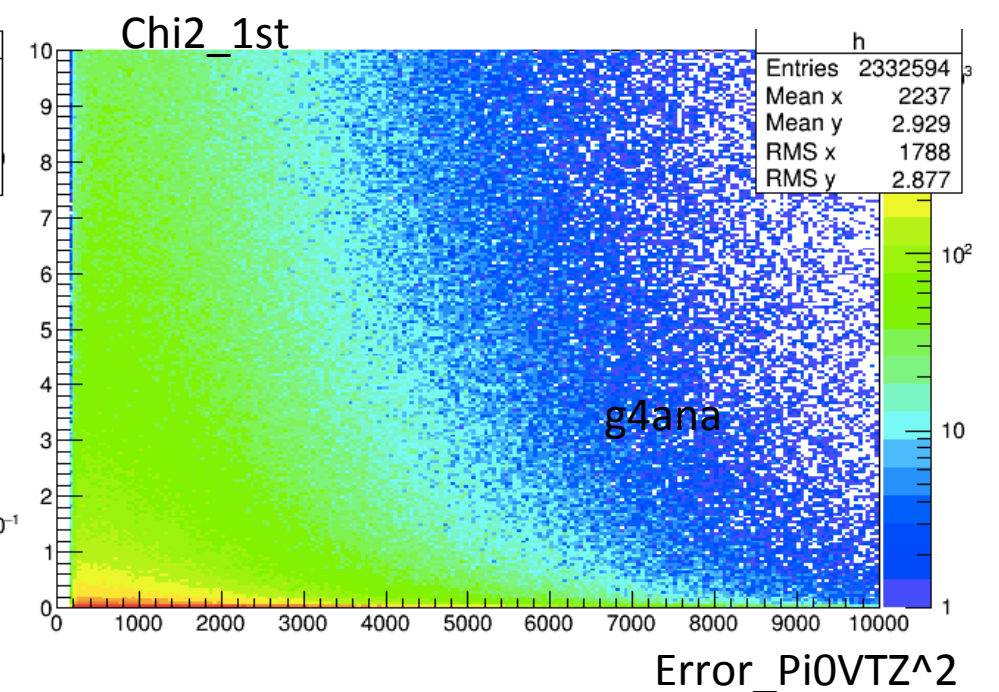
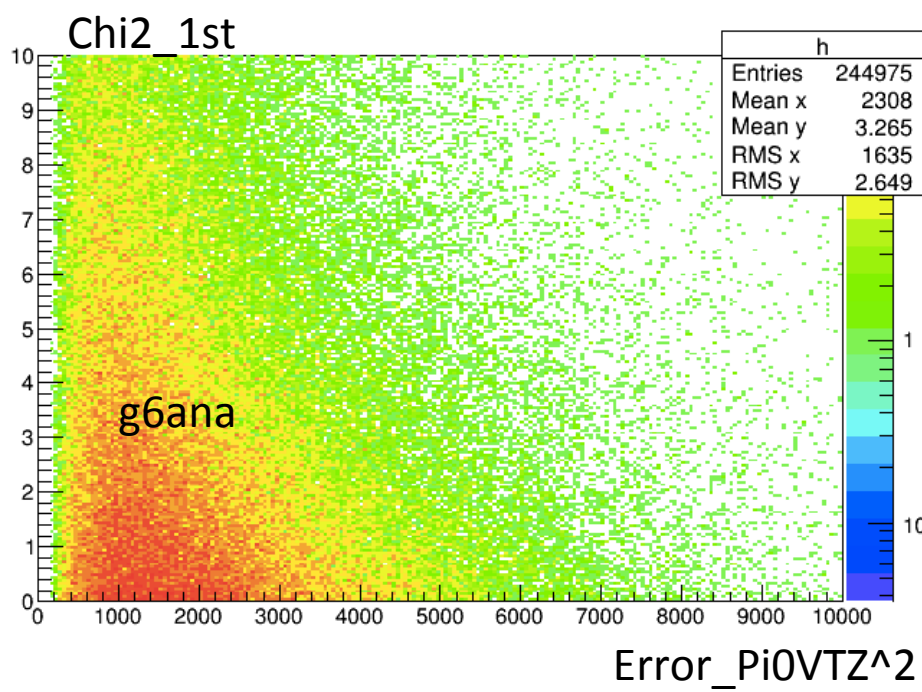
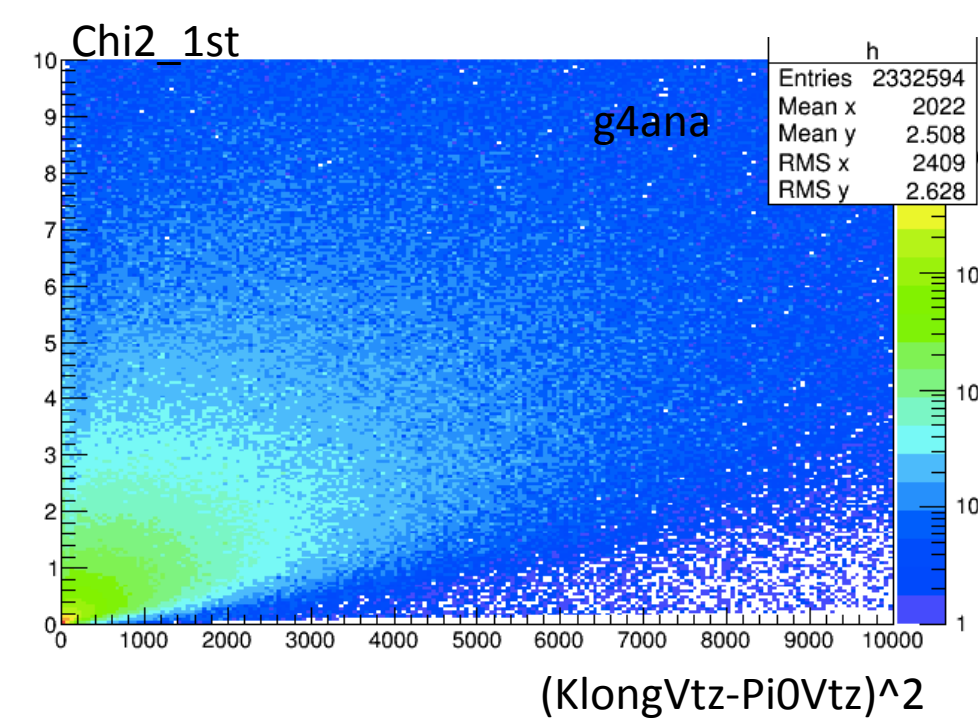
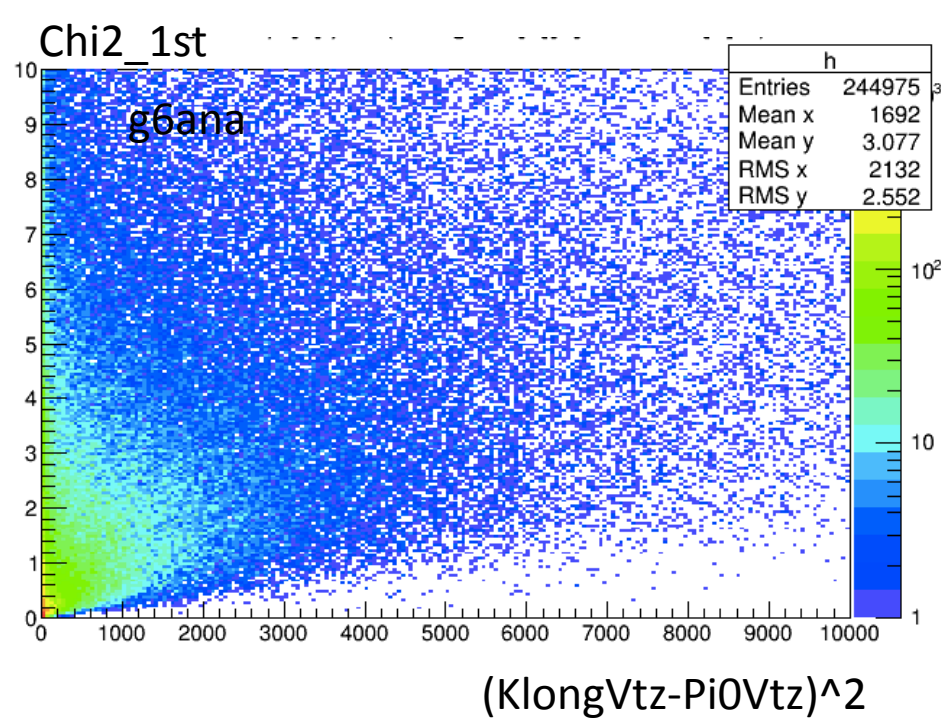
New chi2 cut on g4ana(KL2pi0)



Chi2 difference between g4 and g6

$$\chi_{vertex}^2 = \sum_{i=1}^2 \frac{(VTZ_{ithPi0} - VTZ_{KL})^2}{\sigma_{vertex}^2}$$



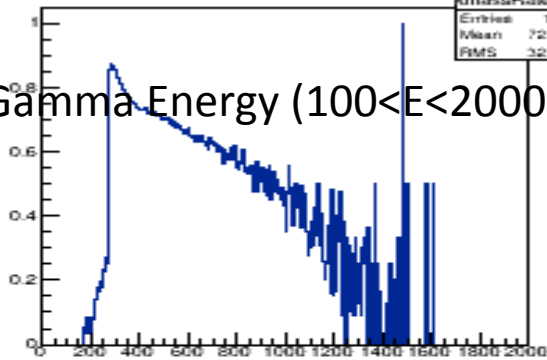


Default g4 kinematical cut

kmassRate_0

kmassRate_0
Entries: 154
Mean: 721.2
RMS: 321.6

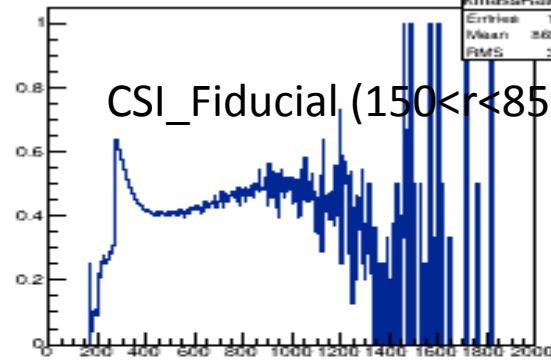
Gamma_Energy ($100 < E < 2000$)



kmassRate_1

kmassRate_1
Entries: 144
Mean: 369.7
RMS: 396

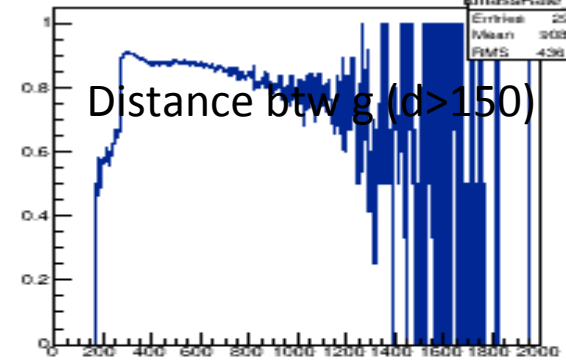
CSI_Fiducial ($150 < r < 850$)



kmassRate_2

kmassRate_2
Entries: 293
Mean: 909.1
RMS: 436.5

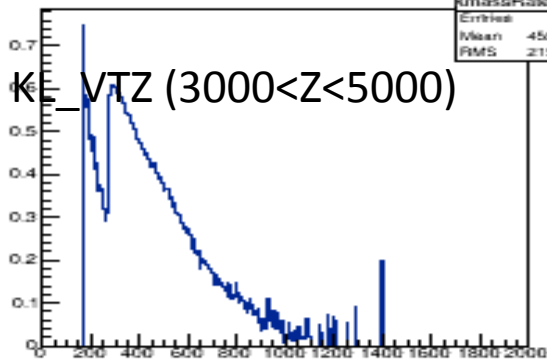
Distance btw g ($d > 150$)



kmassRate_3

kmassRate_3
Entries: 61
Mean: 459.9
RMS: 219.6

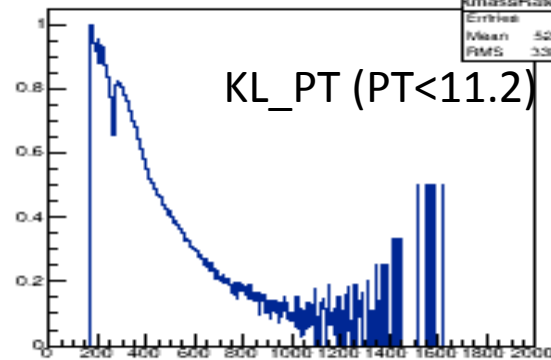
K_VTZ ($3000 < Z < 5000$)



kmassRate_4

kmassRate_4
Entries: 95
Mean: 522.1
RMS: 339.3

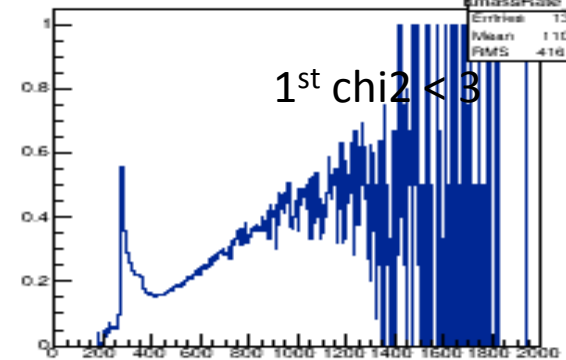
KL_PT ($PT < 11.2$)



kmassRate_5

kmassRate_5
Entries: 135
Mean: 1102
RMS: 416.7

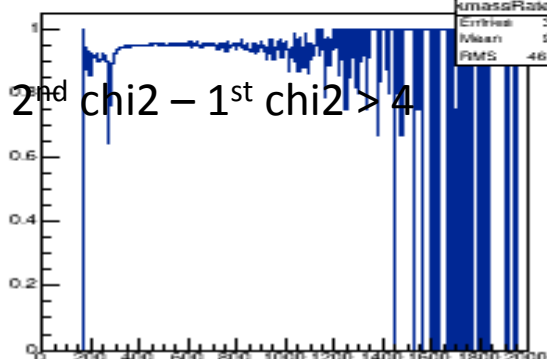
1st chi2 < 3



kmassRate_6

kmassRate_6
Entries: 367
Mean: 955
RMS: 461.3

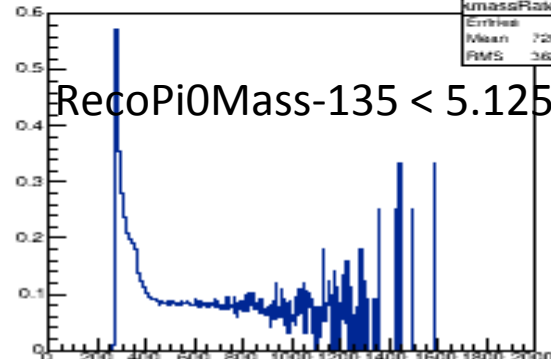
2nd chi2 - 1st chi2 > 4



kmassRate_7

kmassRate_7
Entries: 27
Mean: 720.4
RMS: 362.6

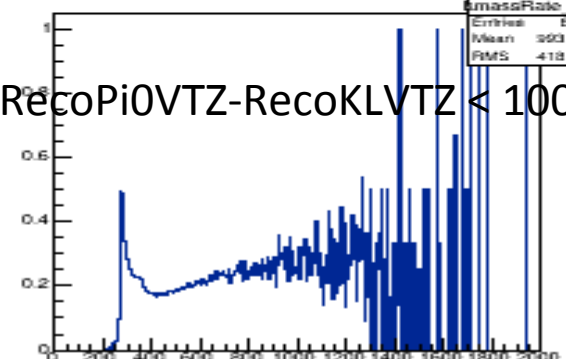
RecoPi0Mass-135 < 5.125



kmassRate_8

kmassRate_8
Entries: 89
Mean: 993.4
RMS: 418.4

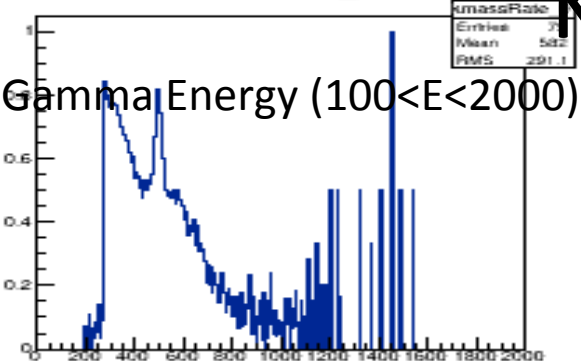
RecoPi0VTZ-RecoKLVZ < 100



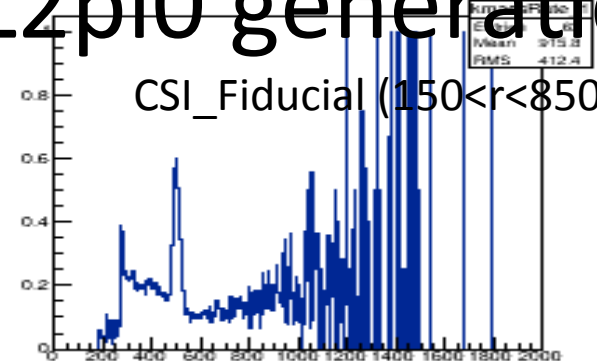
Default g4 kinematical cut

KL2pi0 generation

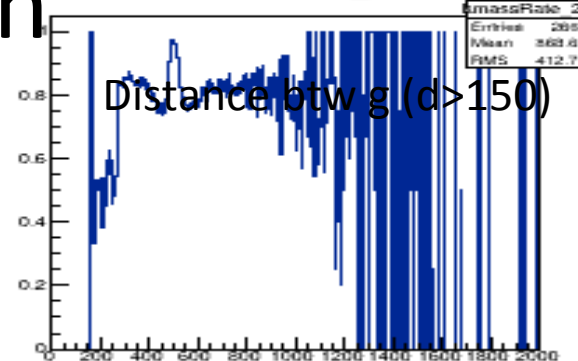
kmassRate_0



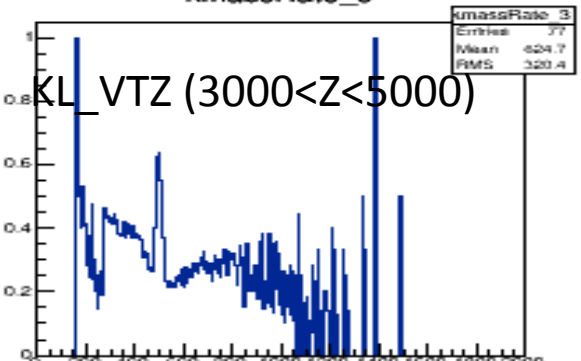
kmassRate_1



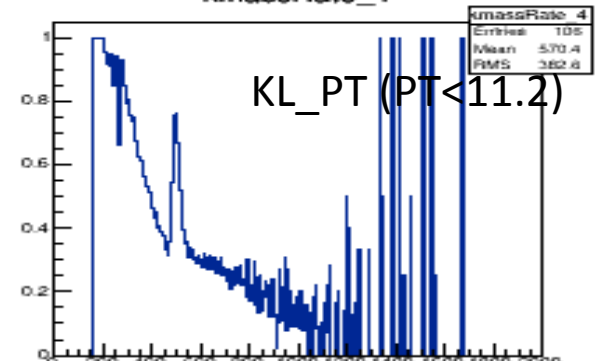
kmassRate_2



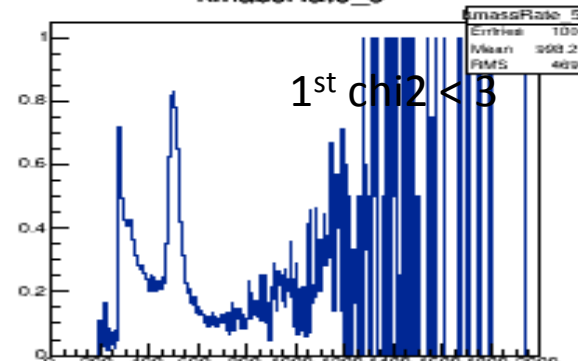
kmassRate_3



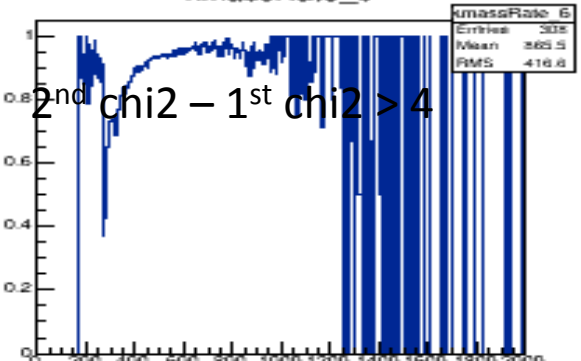
kmassRate_4



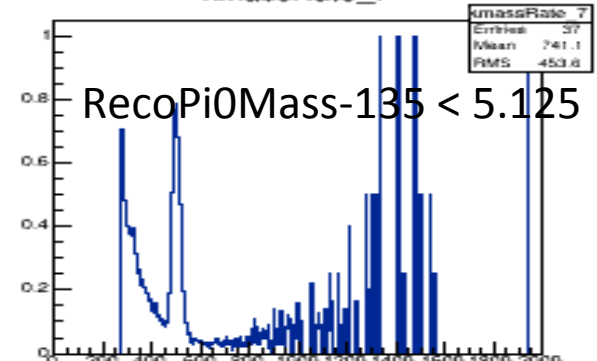
kmassRate_5



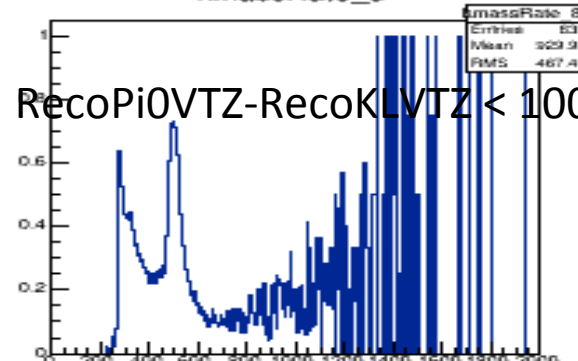
kmassRate_6



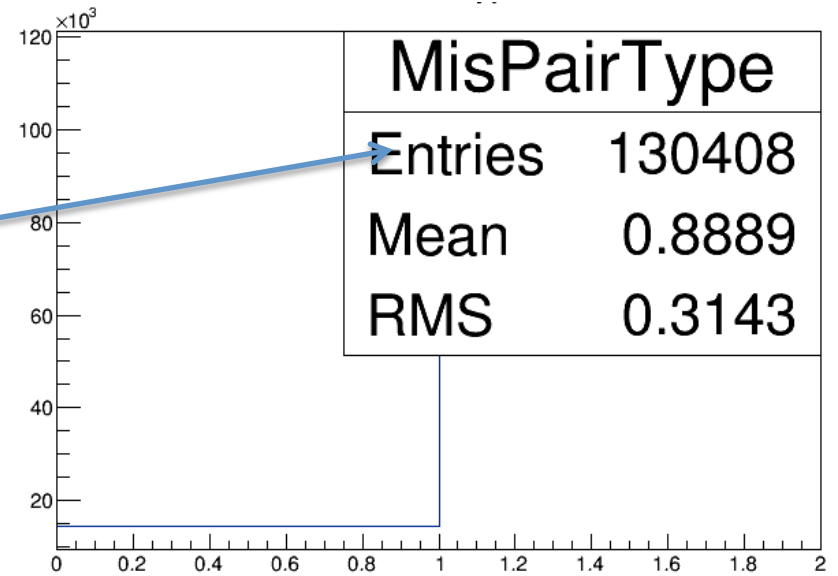
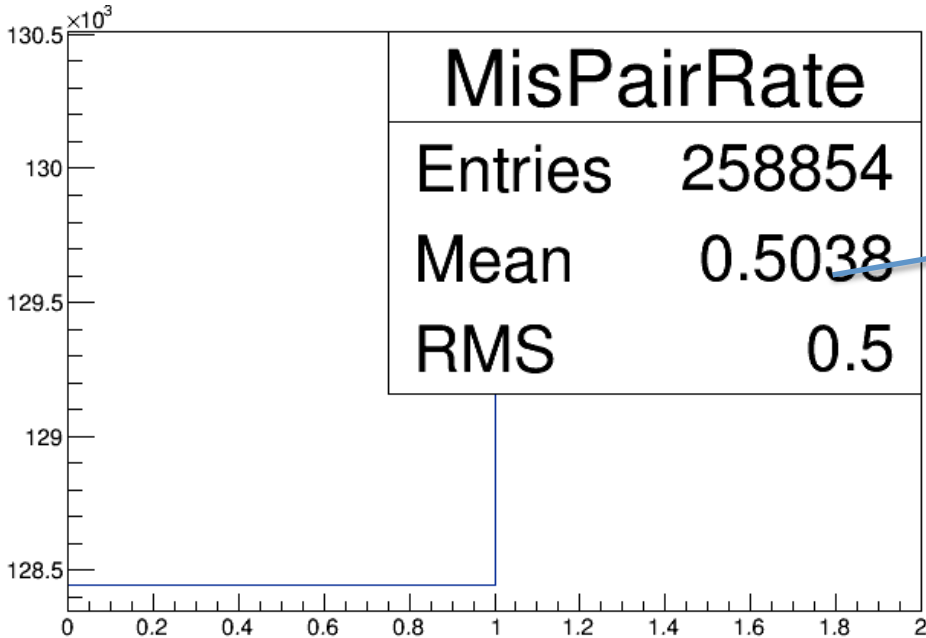
kmassRate_7



kmassRate_8



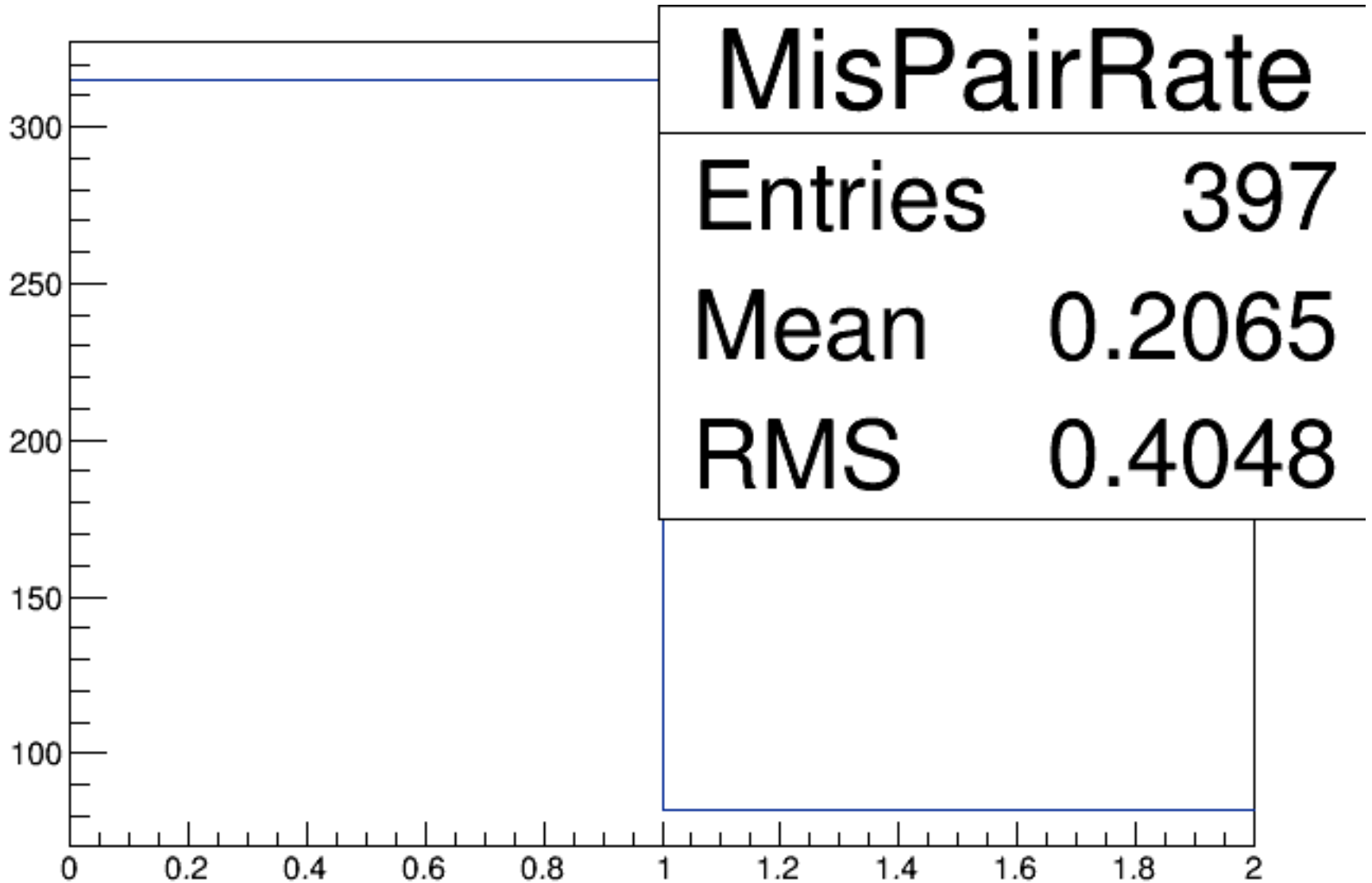
MisPairType (5g+1g)



0.11 : bad pair between 2pi0

0.89 : bad pair with 5th gamma

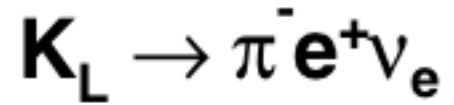
4g



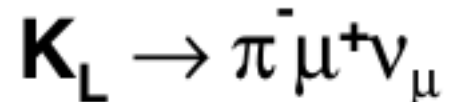
Veto on

- CV(0.25MeV)
- NCC(2MeV)
- CC03(3MeV)

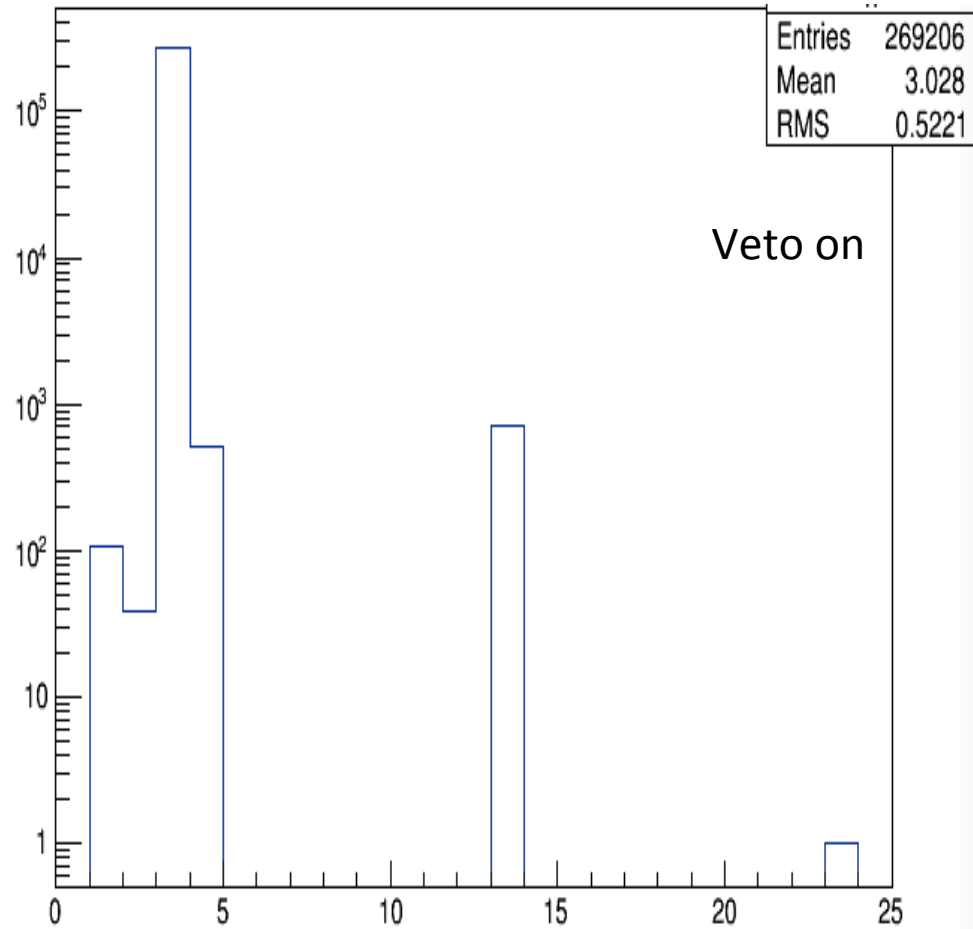
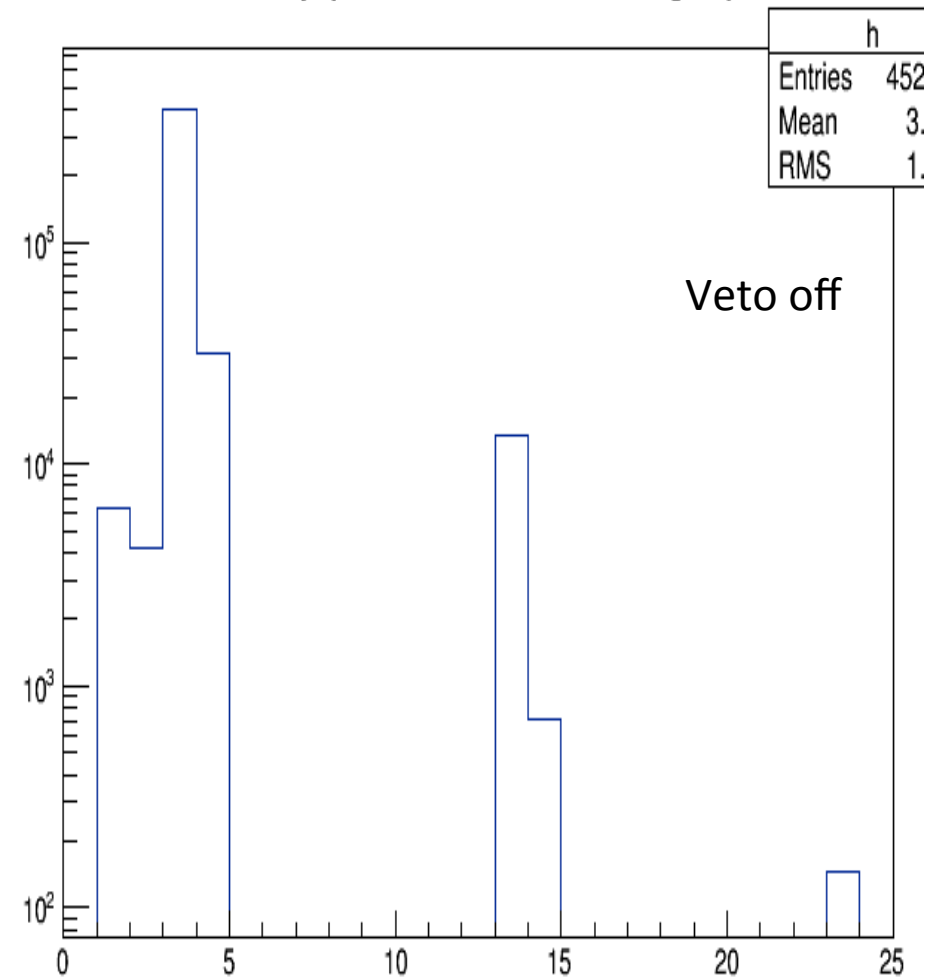
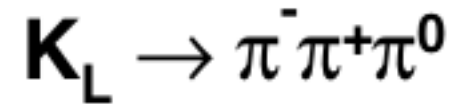
DecayMode : 1



DecayMode : 2



DecayMode : 4



Reconstruction check

- Rec2pi0(gamma list, opt)
 - Opt 1 : COE
 - Opt 0 : $xy=0$ (fixed)
 - Default : COE

Things to do

- MIP calibration check in Run62
- In g4ana, chi2 of 2pi0 cut is valid even if 1st chi2 is much small ($\ll 1$)
- But in 5g+1g, chi2 of 2pi0 cut is not effective
- Other way of vertexing KL