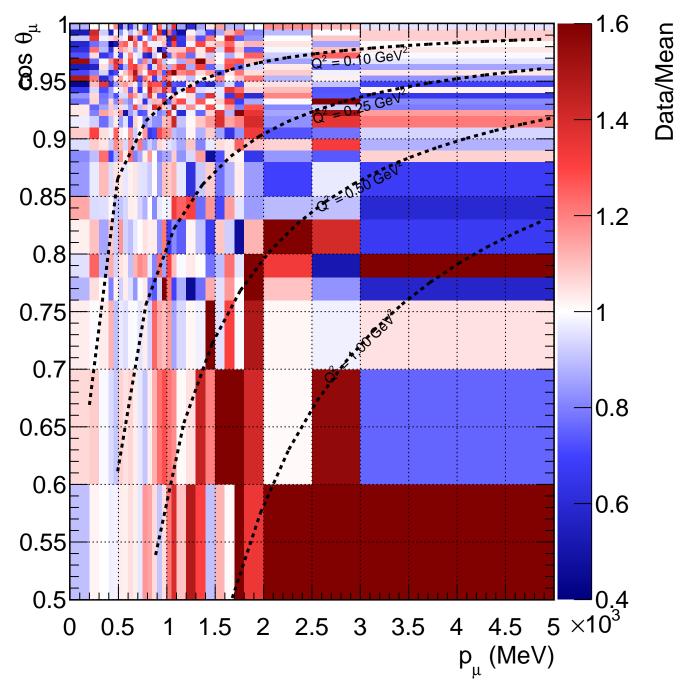
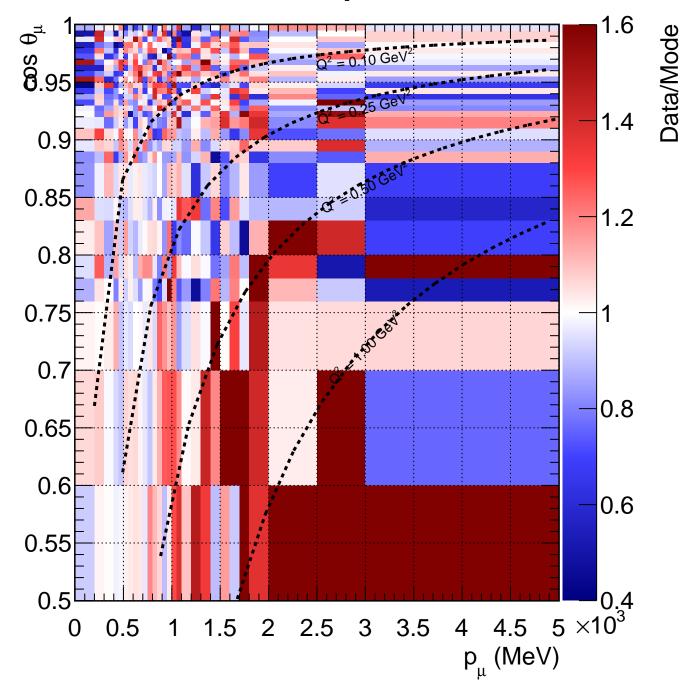


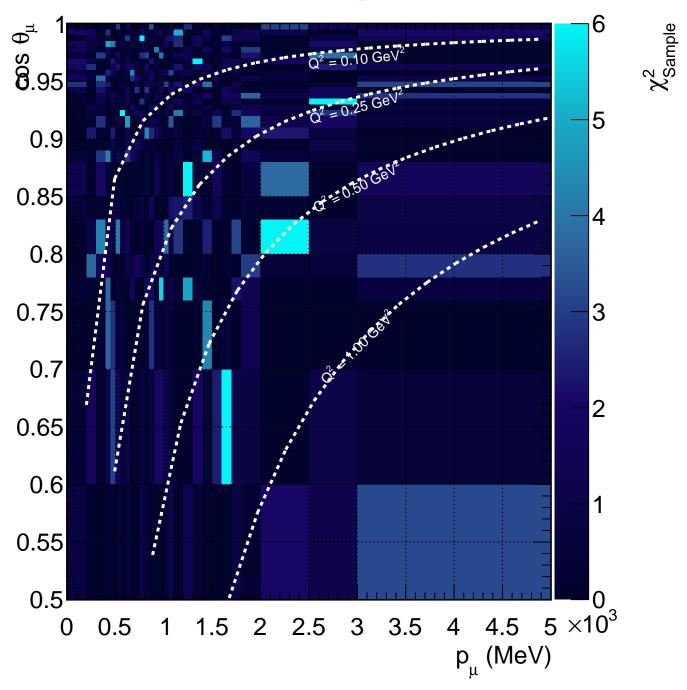
FGD1\_numuCC\_0pi\_mean\_ratio



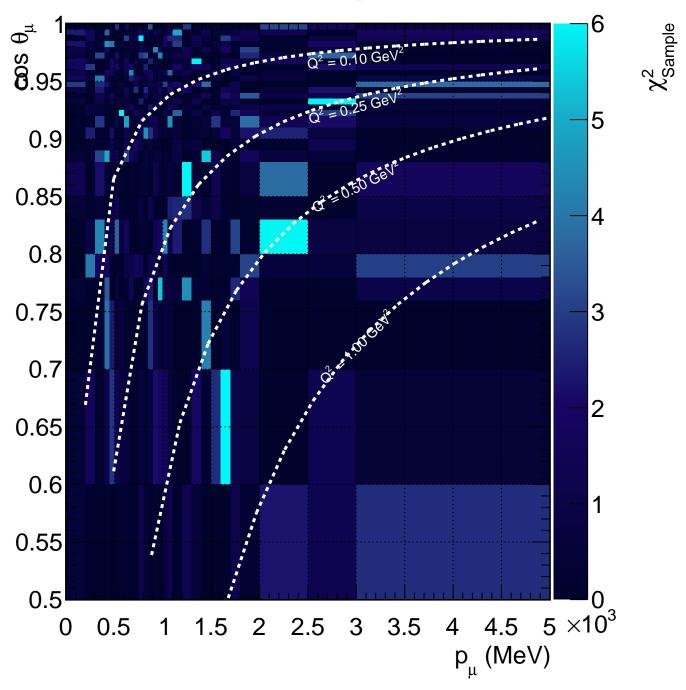
FGD1\_numuCC\_0pi\_mode\_ratio



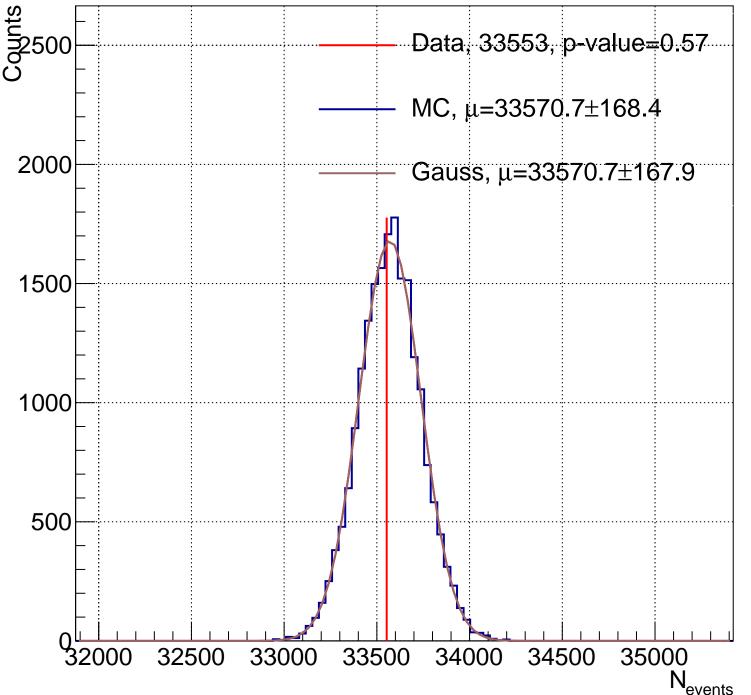
## FGD1\_numuCC\_0pi\_MeanInL

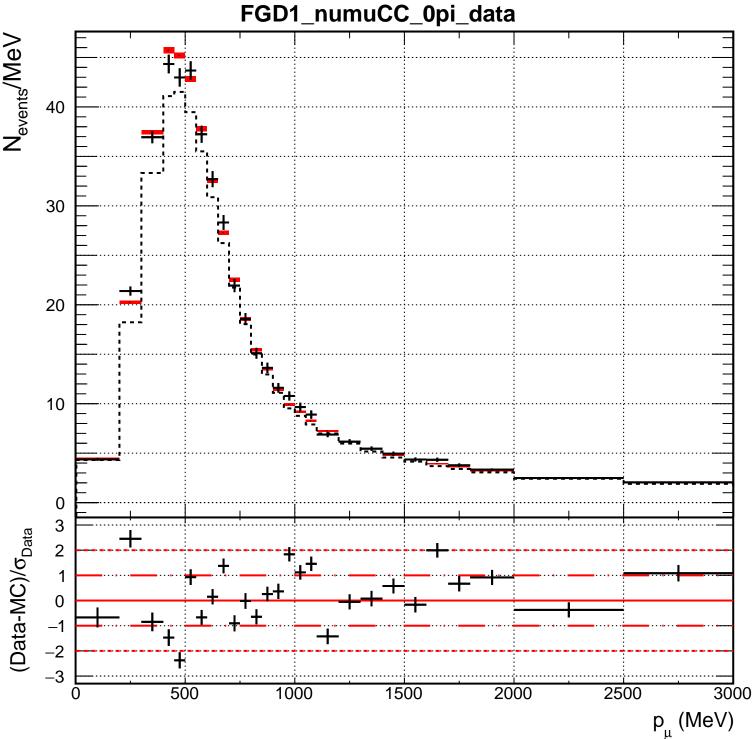


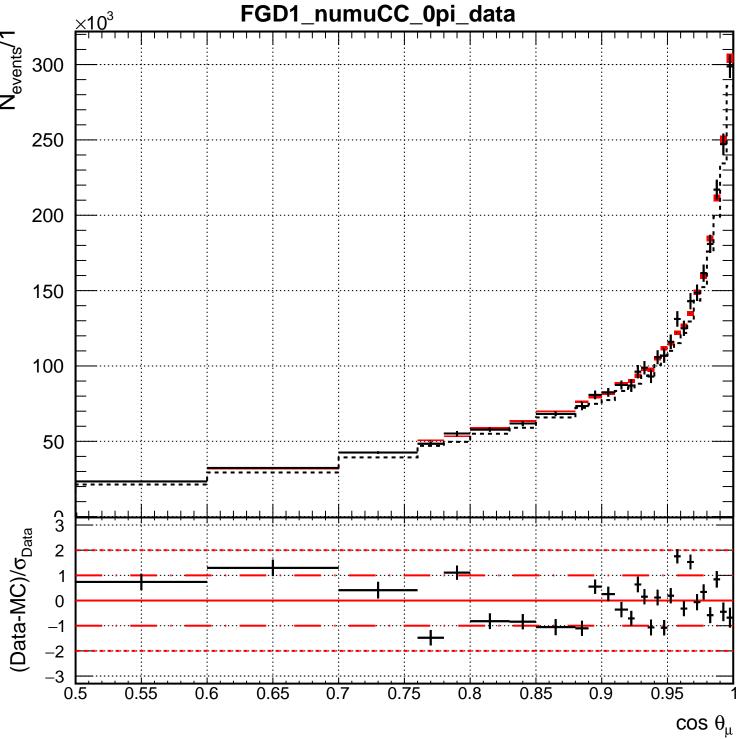
## FGD1\_numuCC\_0pi\_ModelnL

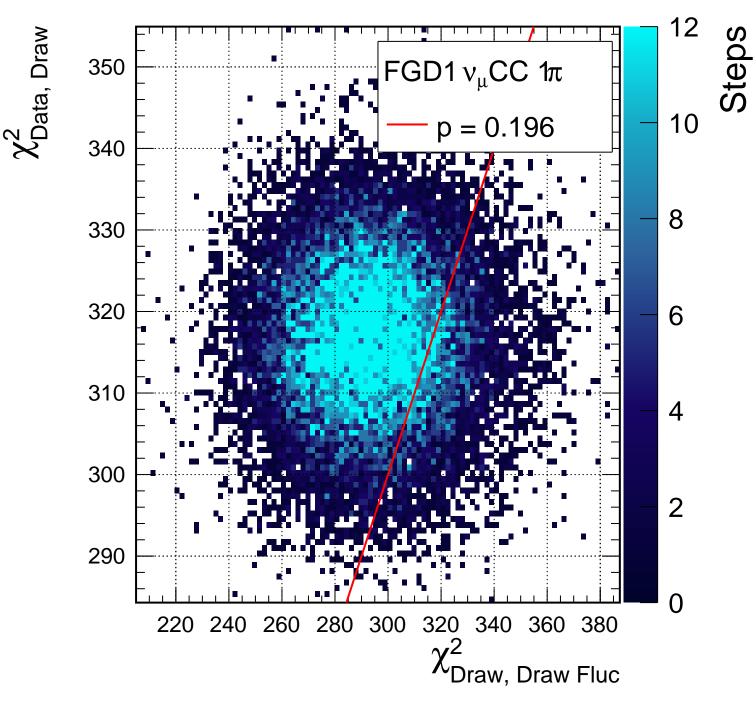


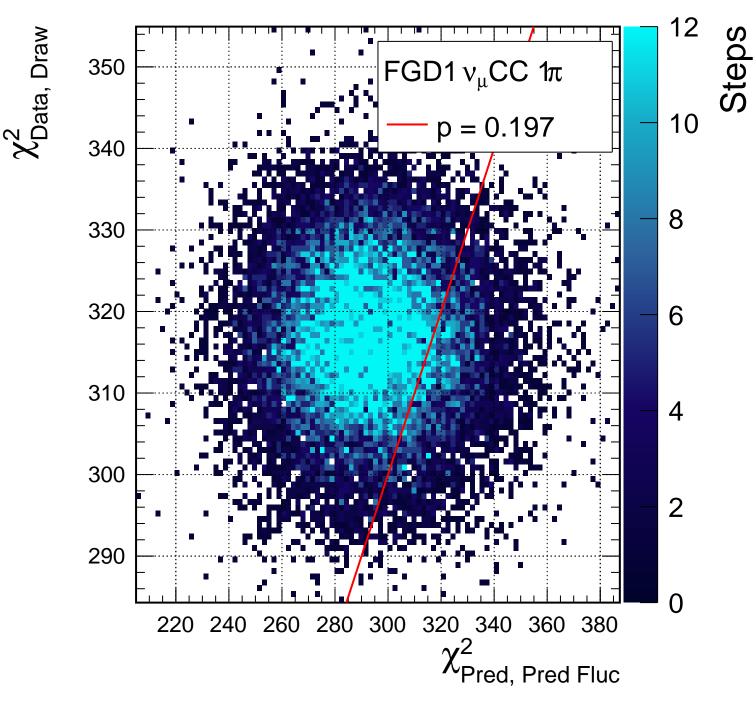
FGD1\_numuCC\_0pi\_sum\_33553



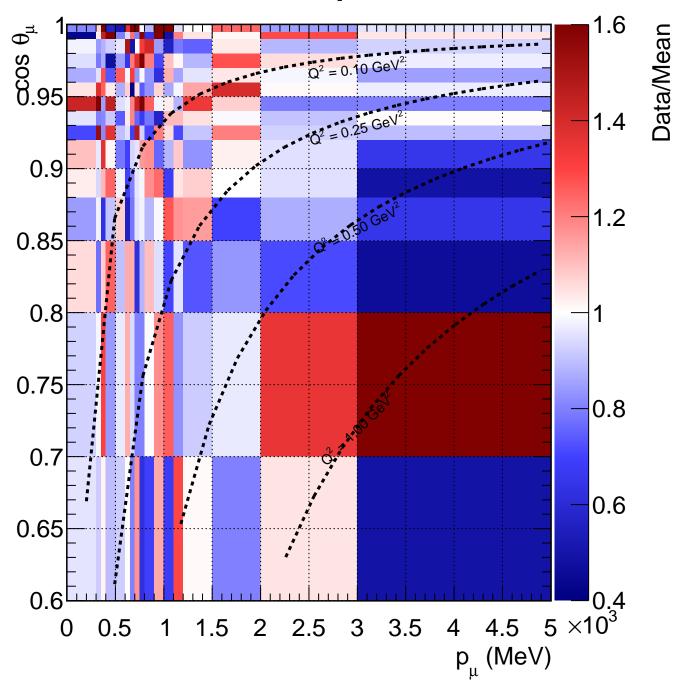




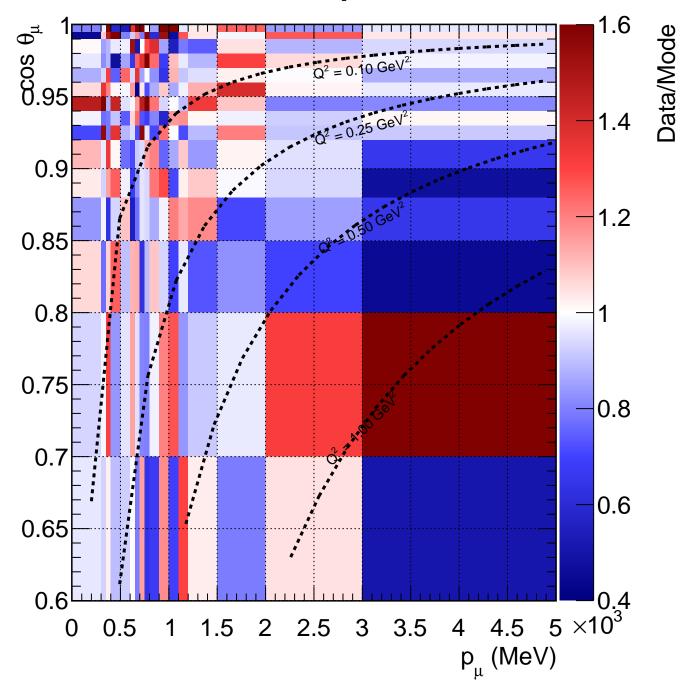




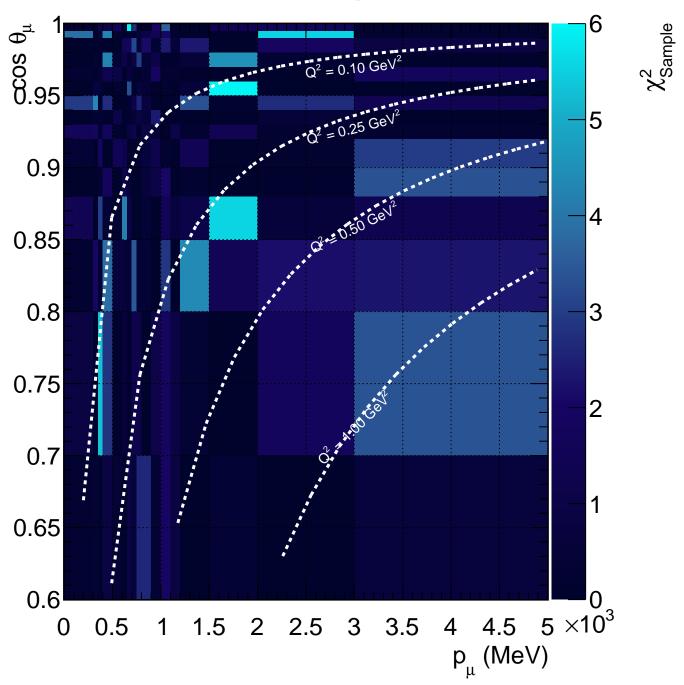
FGD1\_numuCC\_1pi\_mean\_ratio



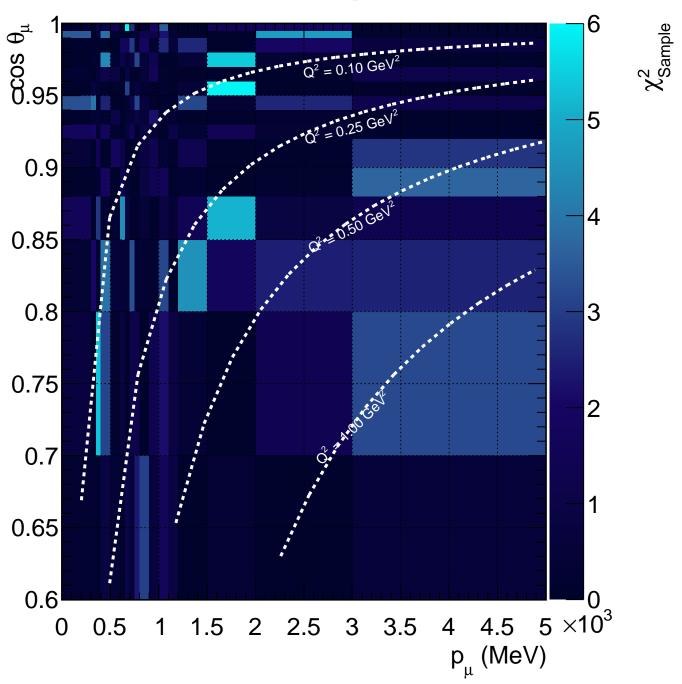
FGD1\_numuCC\_1pi\_mode\_ratio

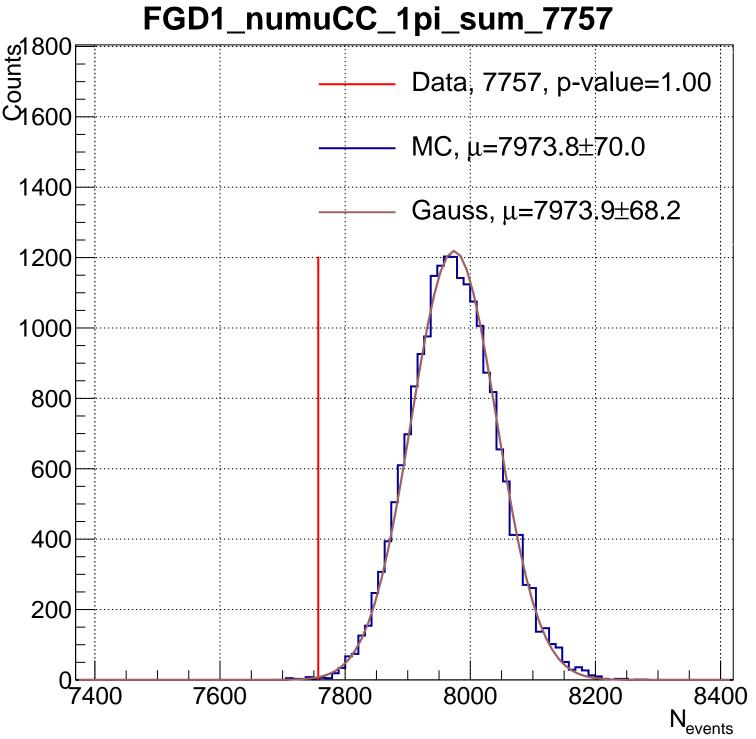


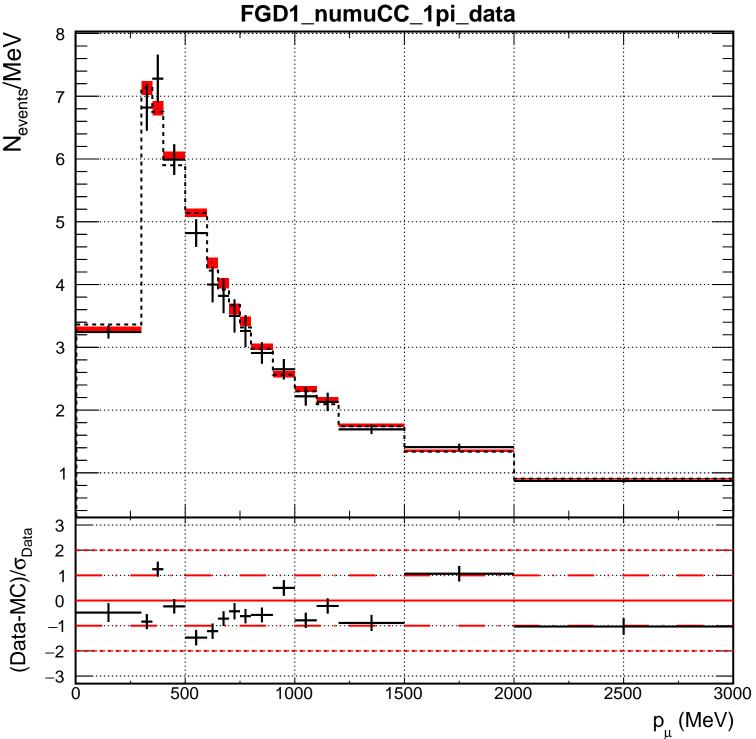
## FGD1\_numuCC\_1pi\_MeanInL

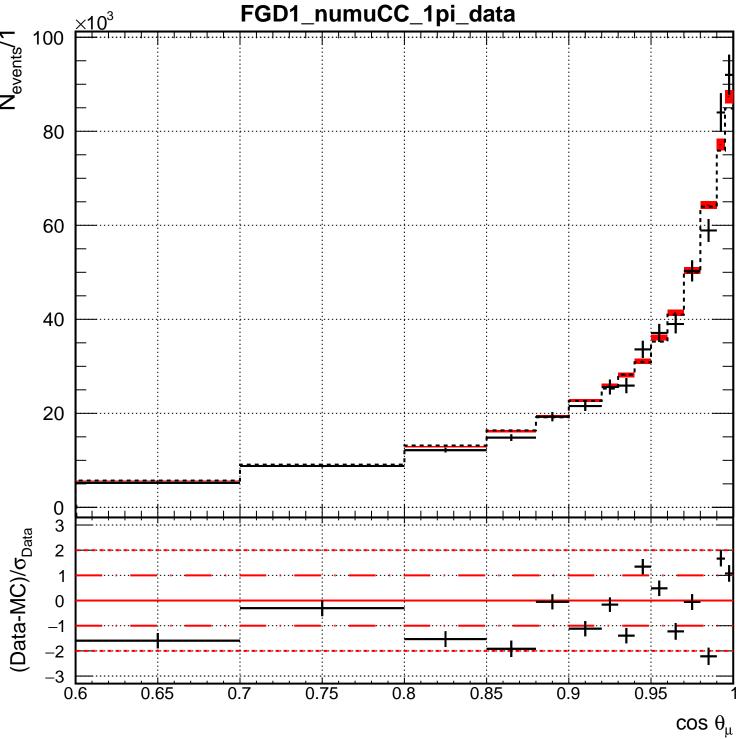


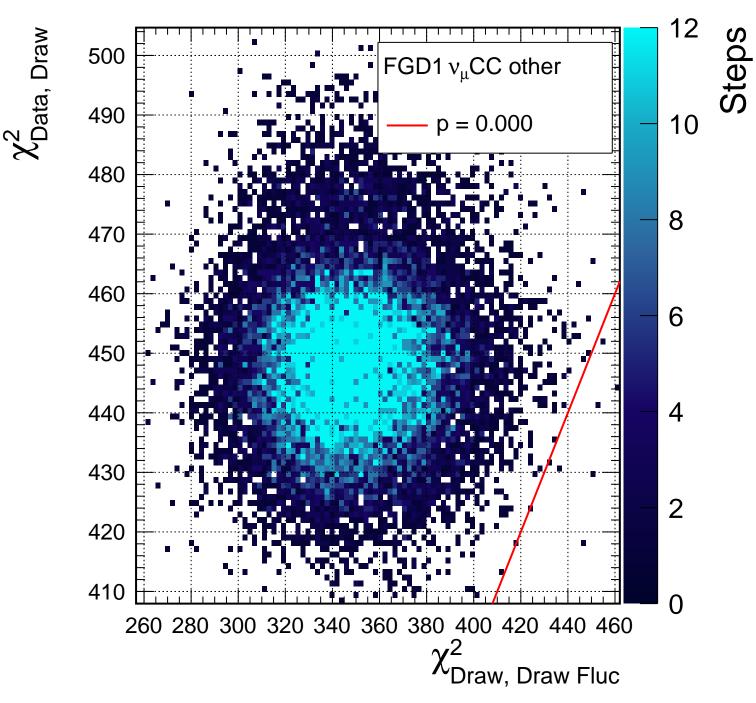
# FGD1\_numuCC\_1pi\_ModeInL

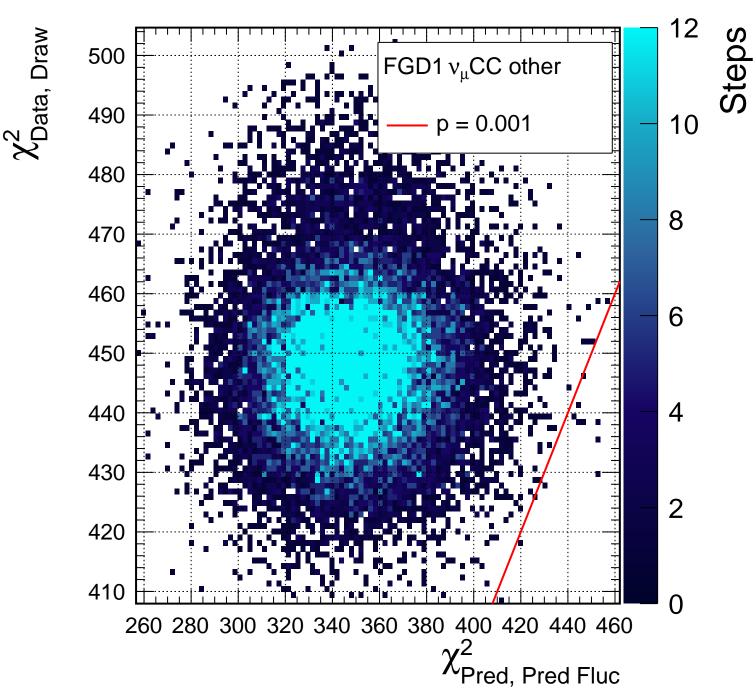




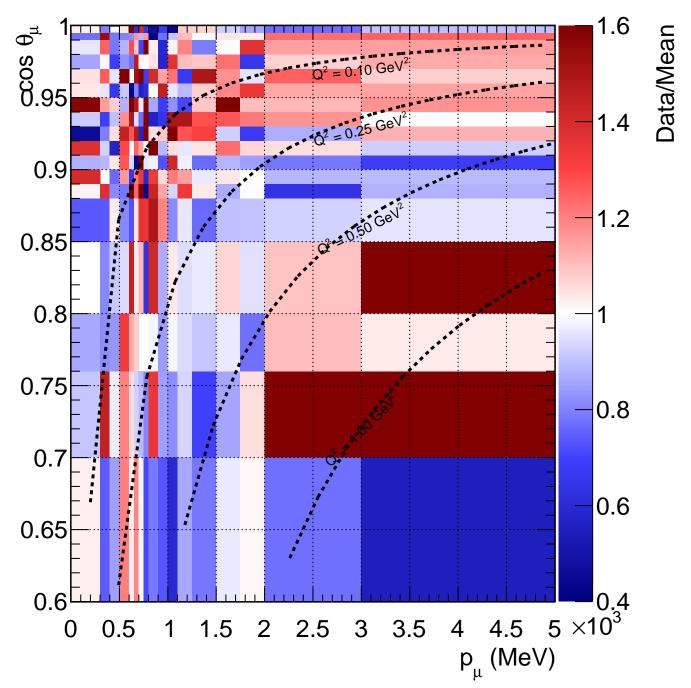




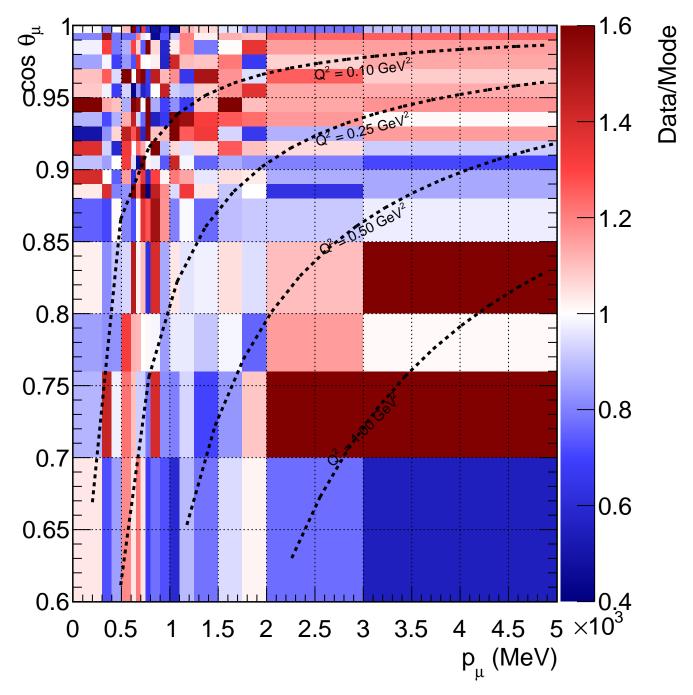




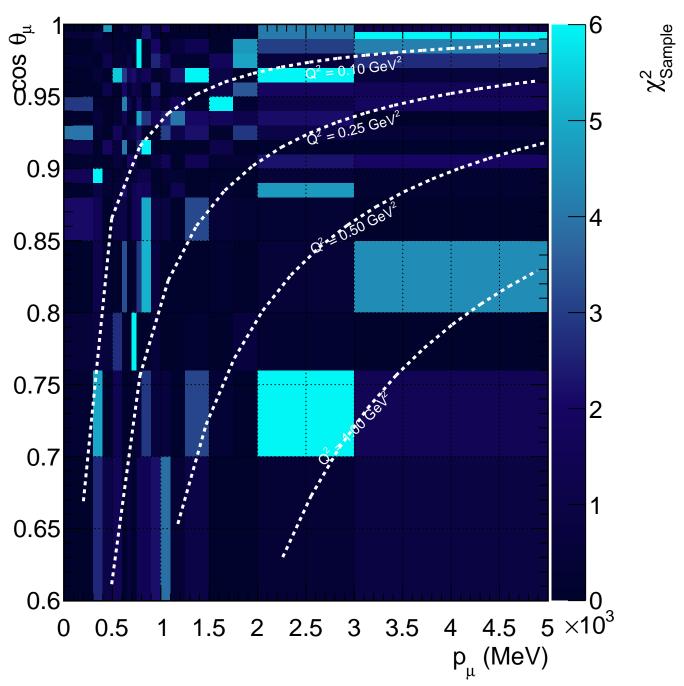
FGD1\_numuCC\_other\_mean\_ratio



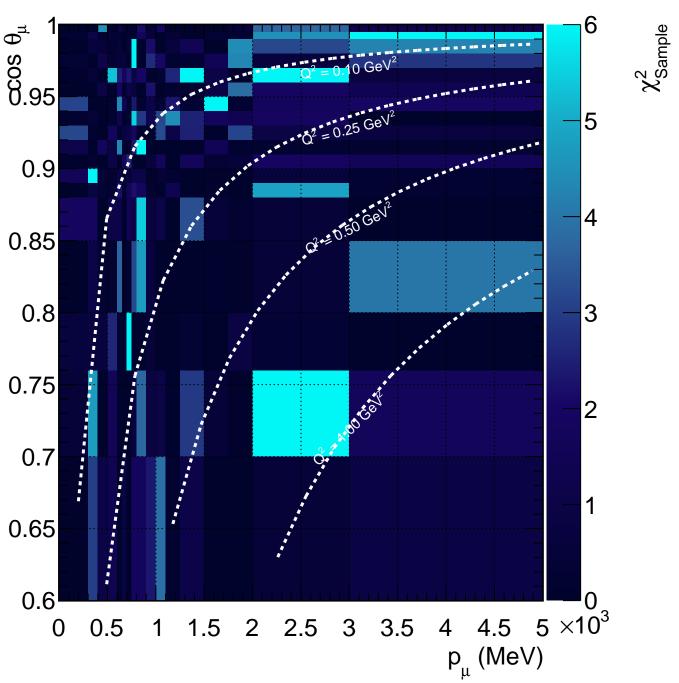
FGD1\_numuCC\_other\_mode\_ratio



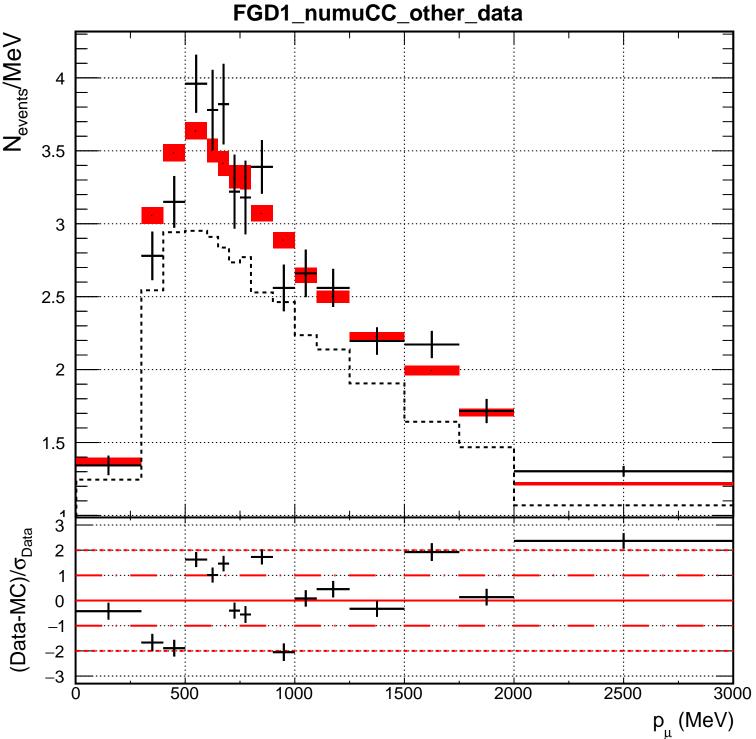
## FGD1\_numuCC\_other\_MeanInL

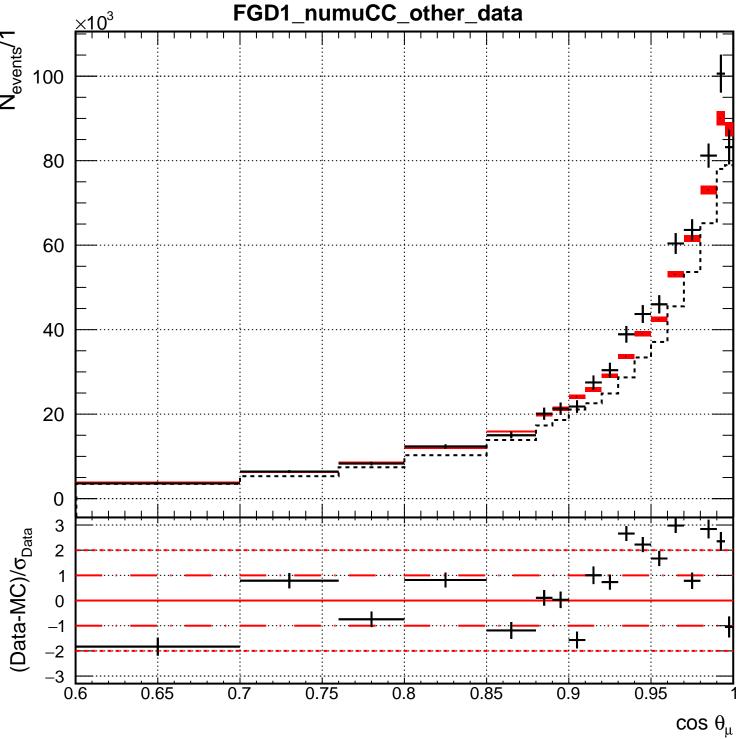


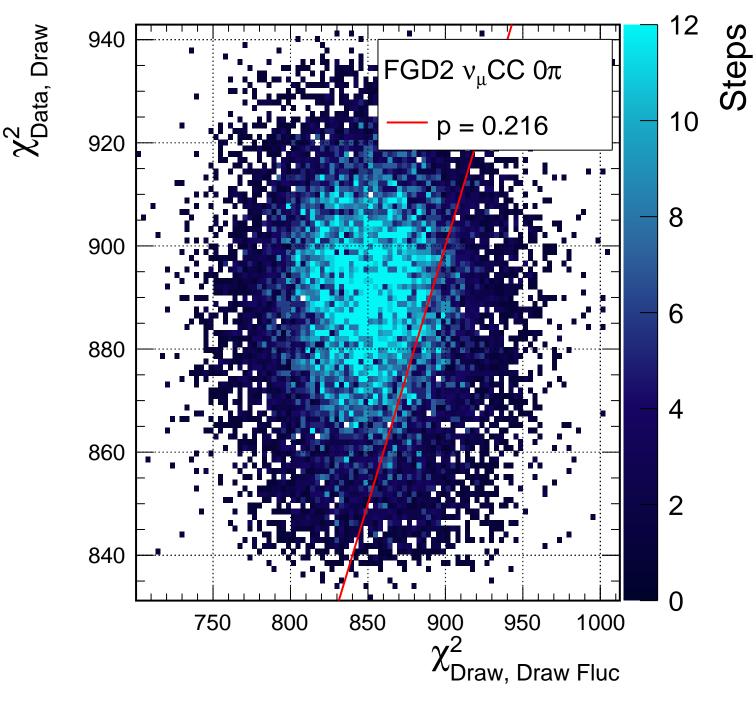
## FGD1\_numuCC\_other\_ModeInL

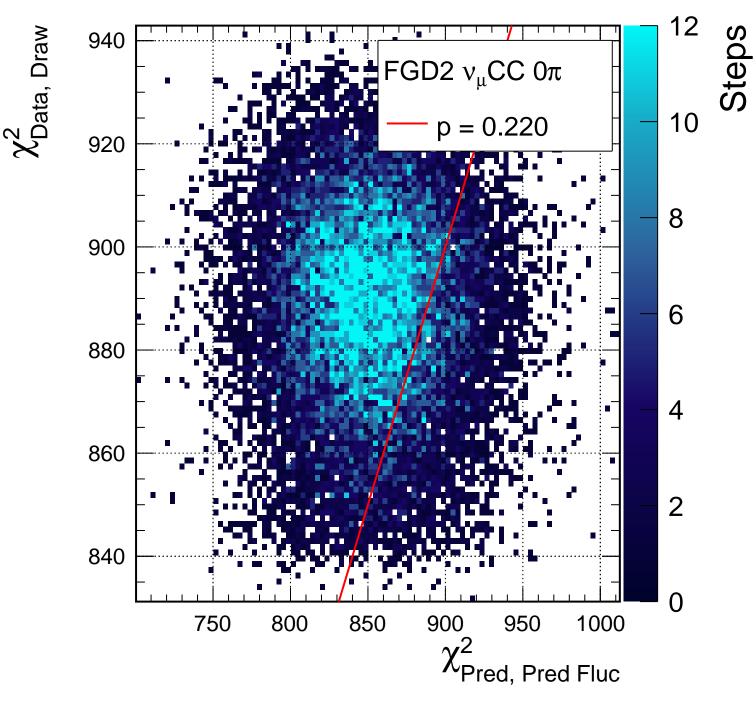


FGD1\_numuCC\_other\_sum\_8068 Counts 1600 Data, 8068, p-value=0.00 MC,  $\mu$ =7854.9±69.6 Gauss,  $\mu$ =7854.8±69.0 N<sub>events</sub>

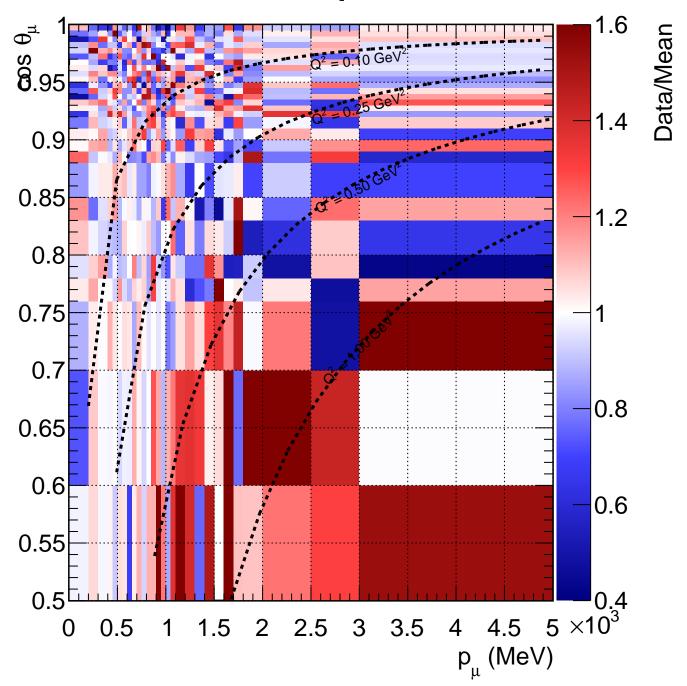




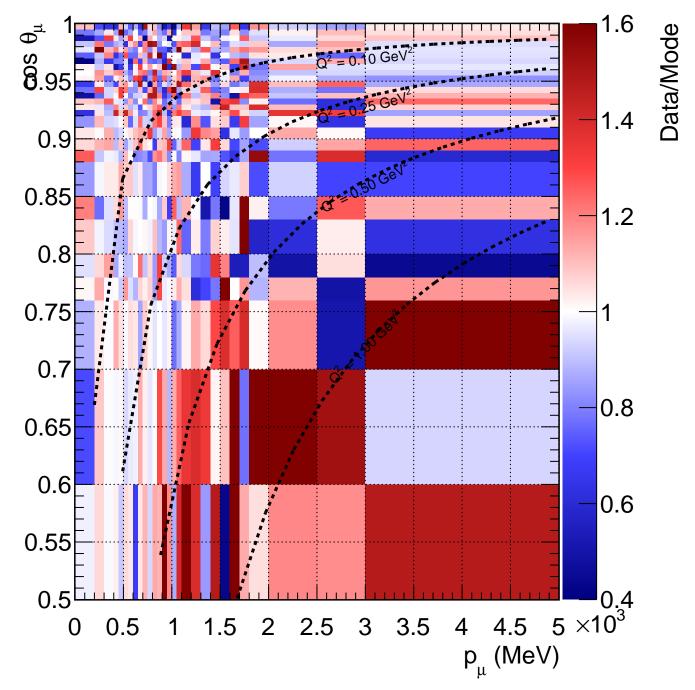




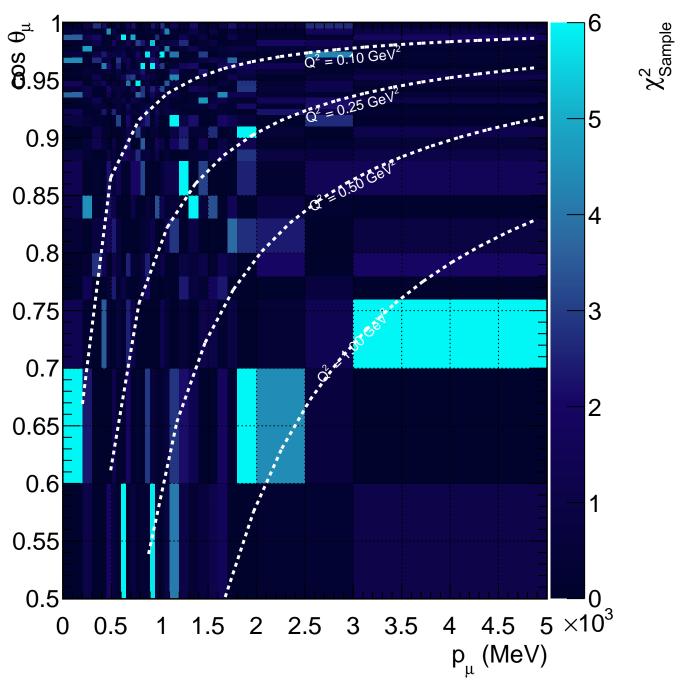
# FGD2\_numuCC\_0pi\_mean\_ratio



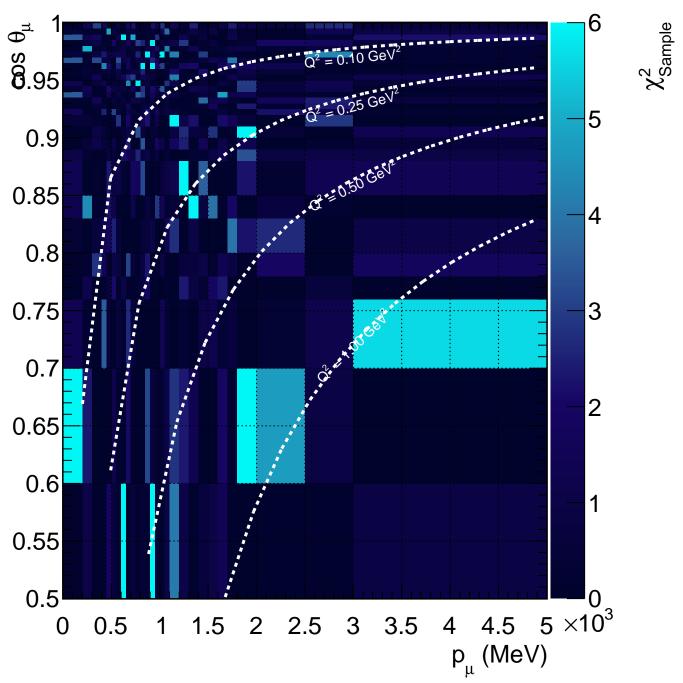
## FGD2\_numuCC\_0pi\_mode\_ratio



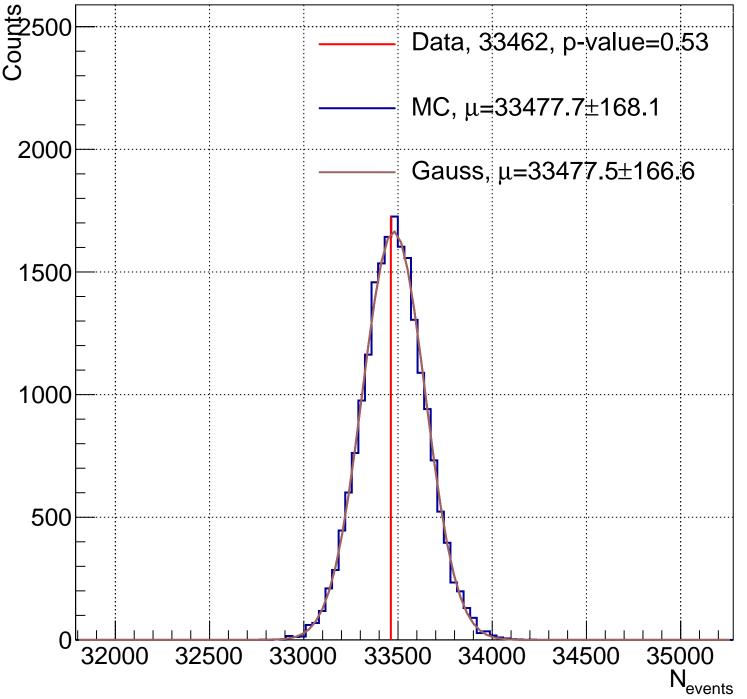
## FGD2\_numuCC\_0pi\_MeanInL

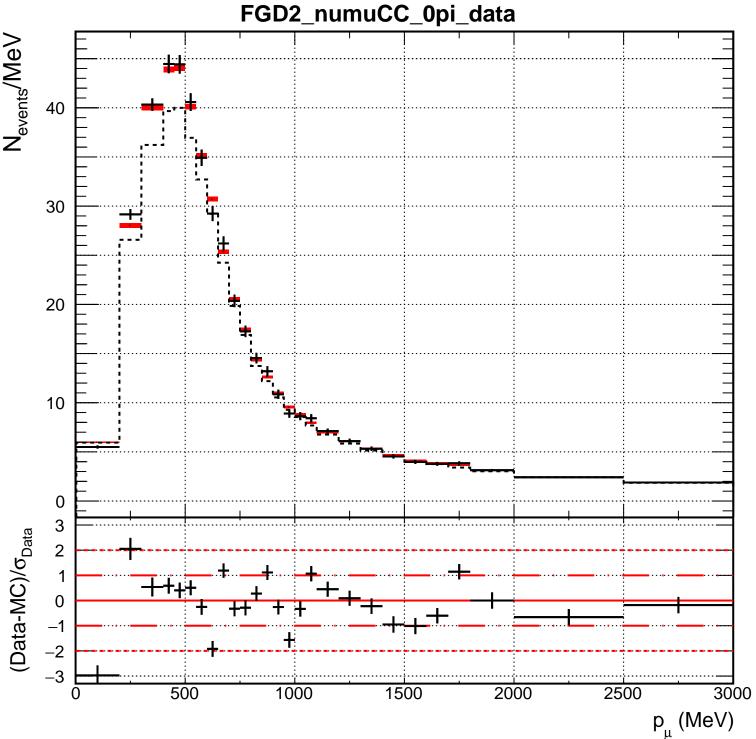


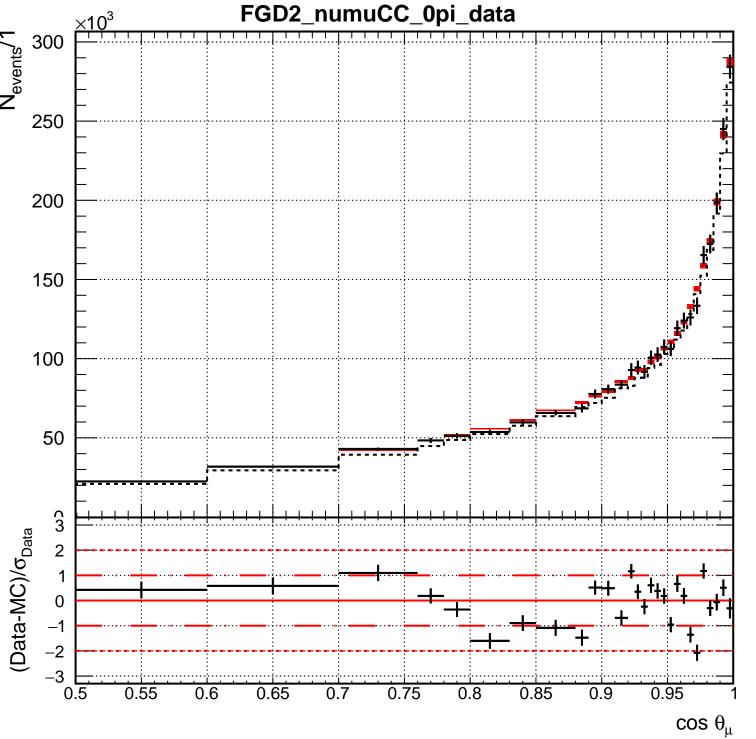
## FGD2\_numuCC\_0pi\_ModeInL

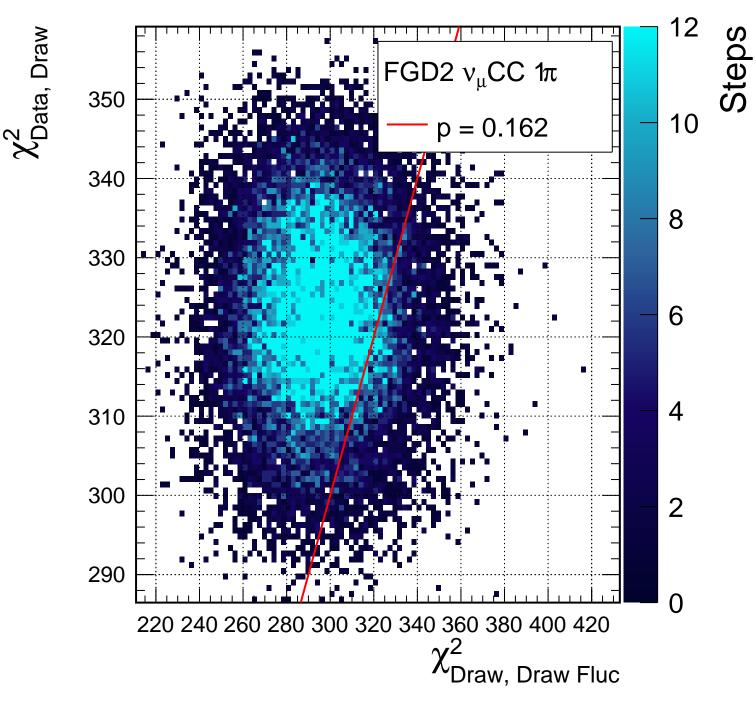


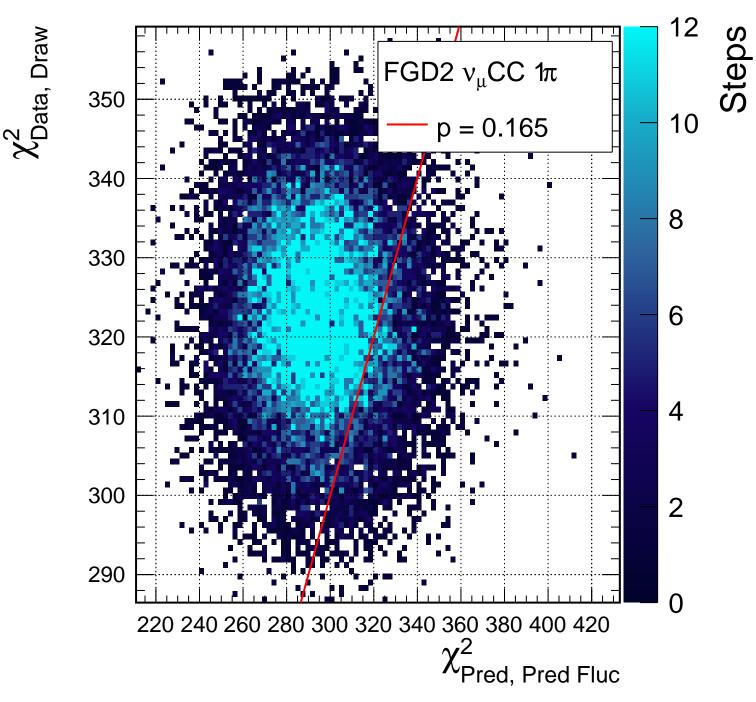
# FGD2\_numuCC\_0pi\_sum\_33462



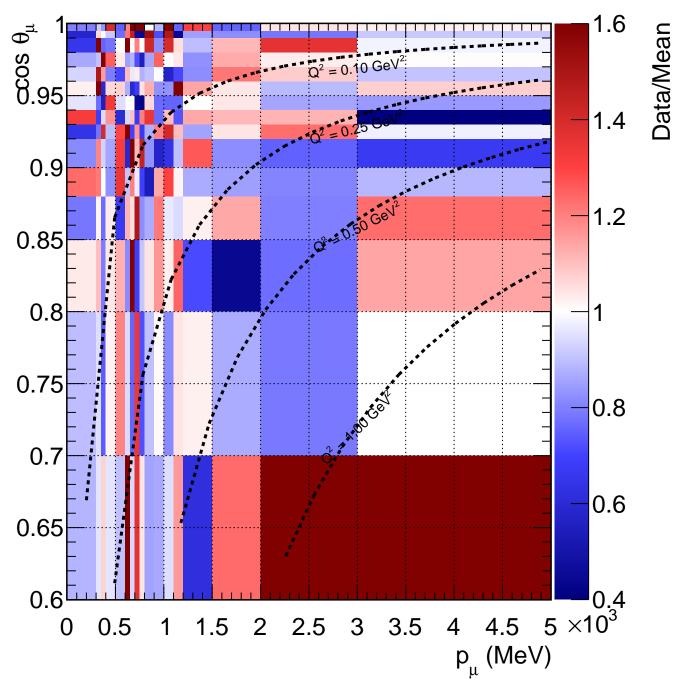




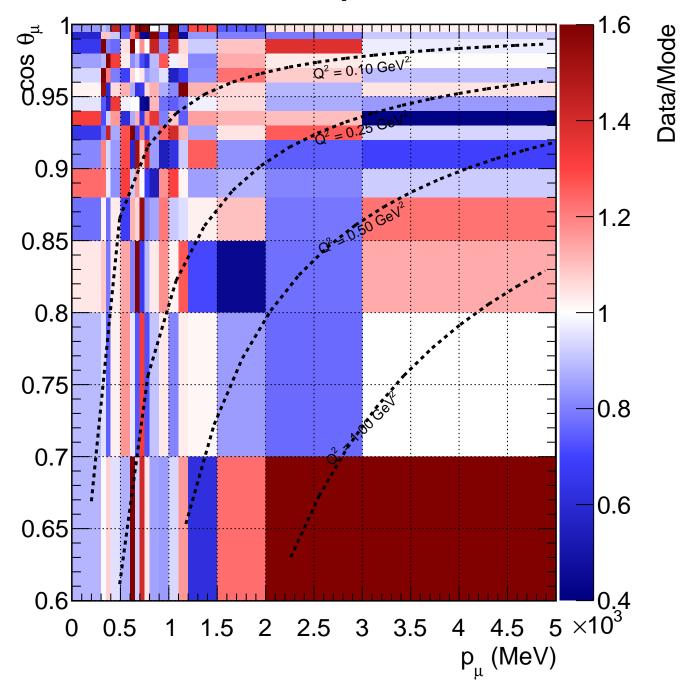




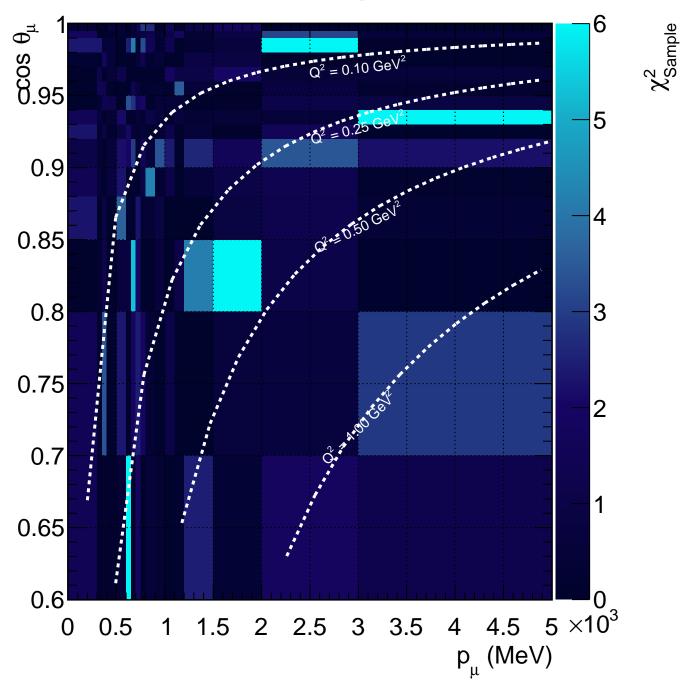
# FGD2\_numuCC\_1pi\_mean\_ratio



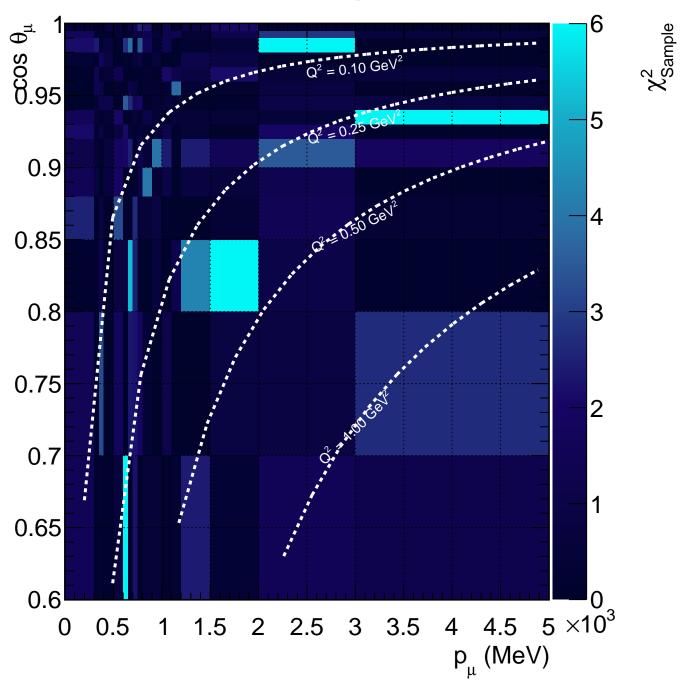
FGD2\_numuCC\_1pi\_mode\_ratio

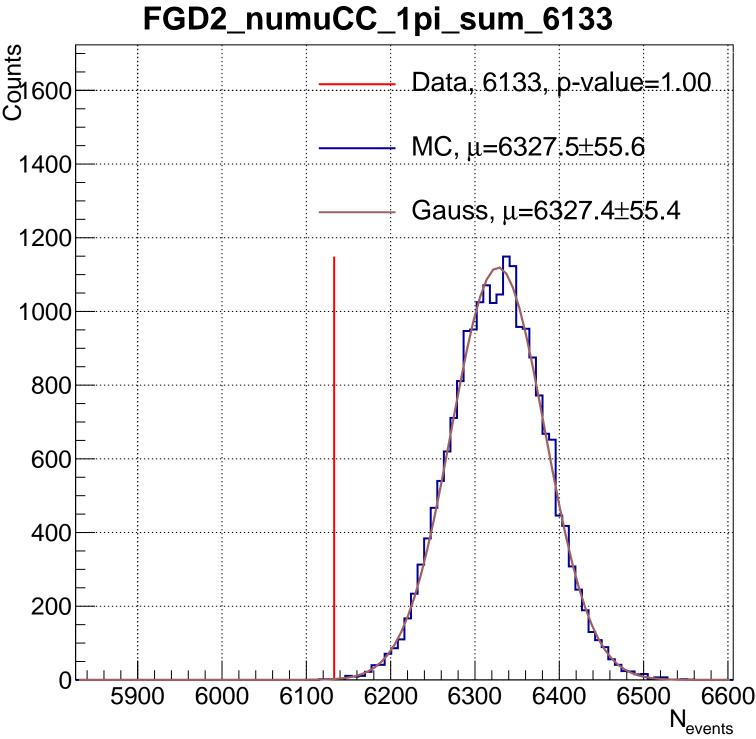


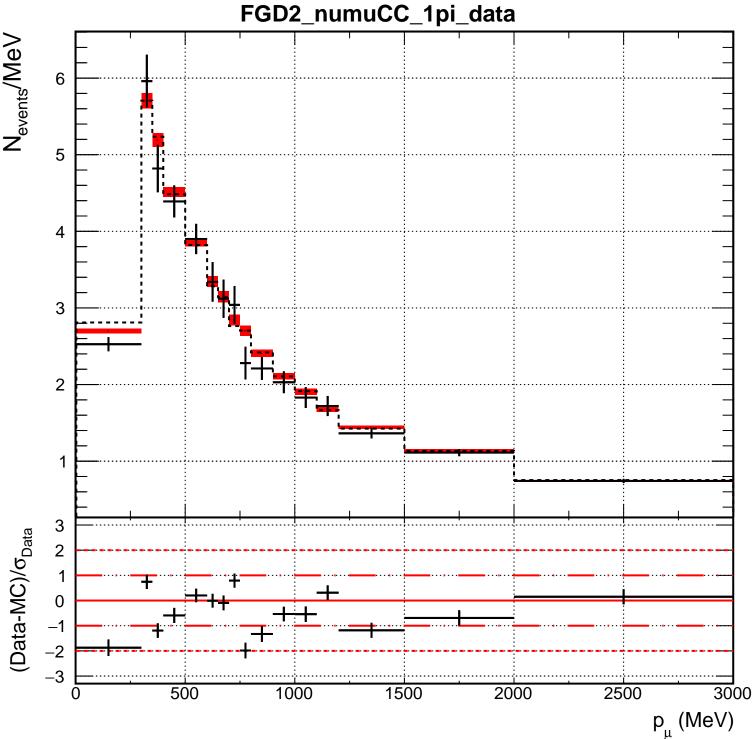
# FGD2\_numuCC\_1pi\_MeanInL

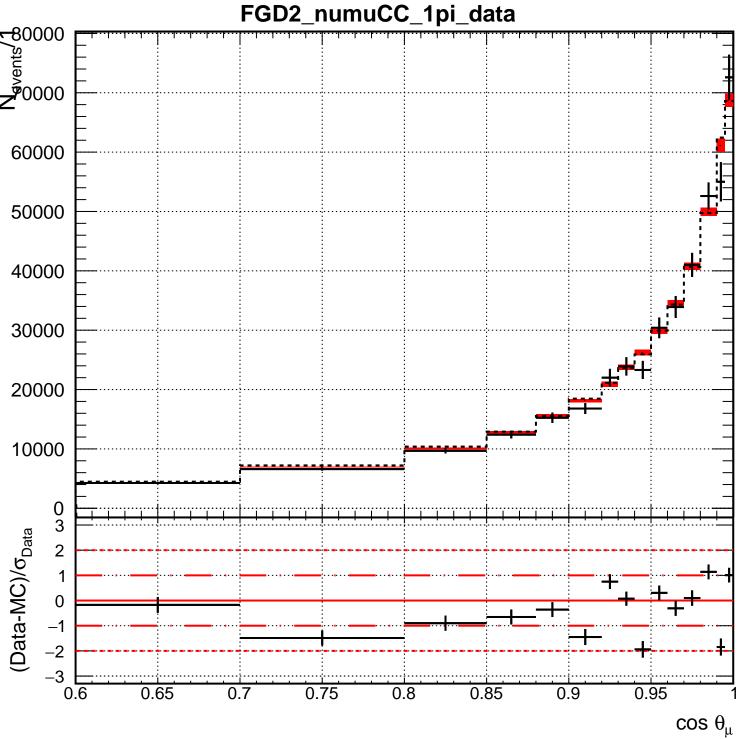


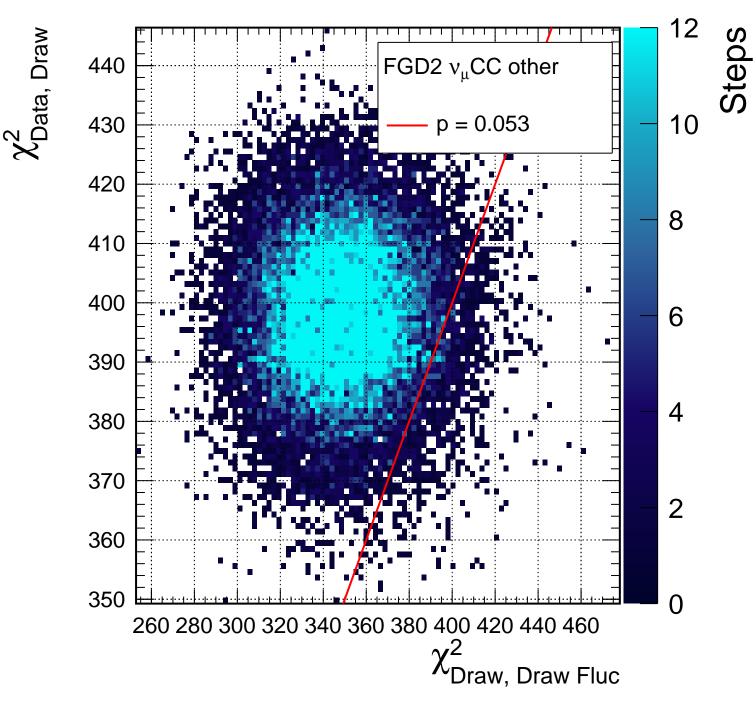
# FGD2\_numuCC\_1pi\_ModeInL

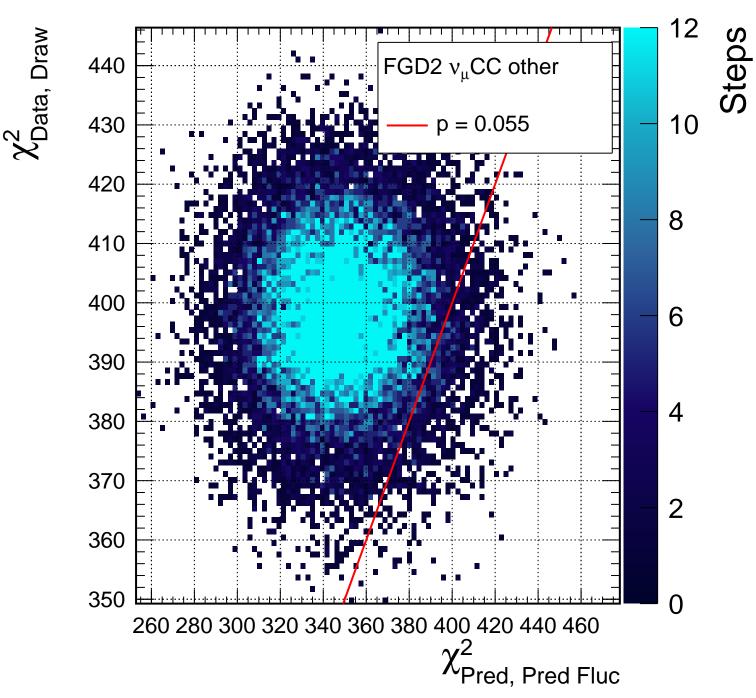




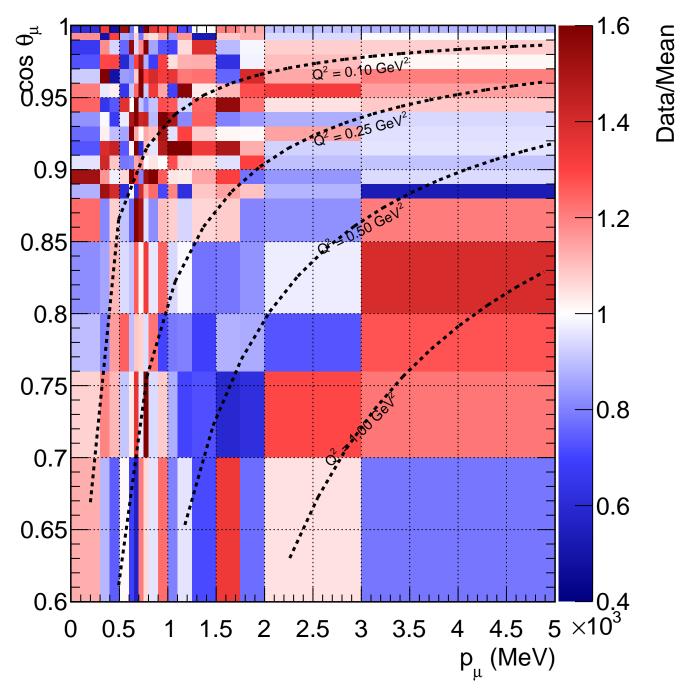




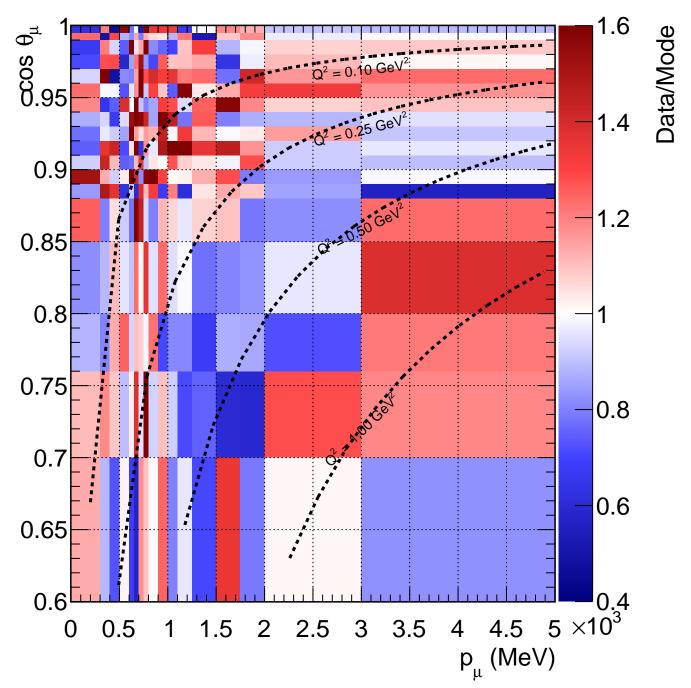




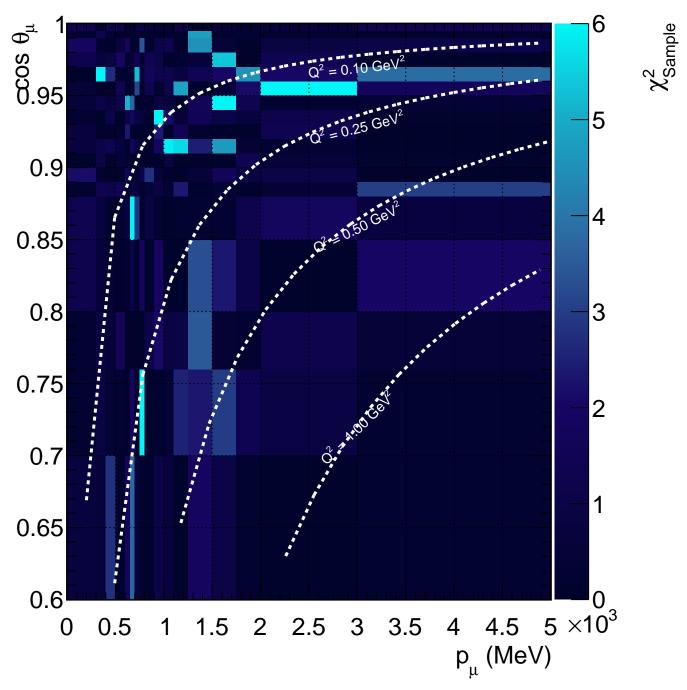
FGD2\_numuCC\_other\_mean\_ratio



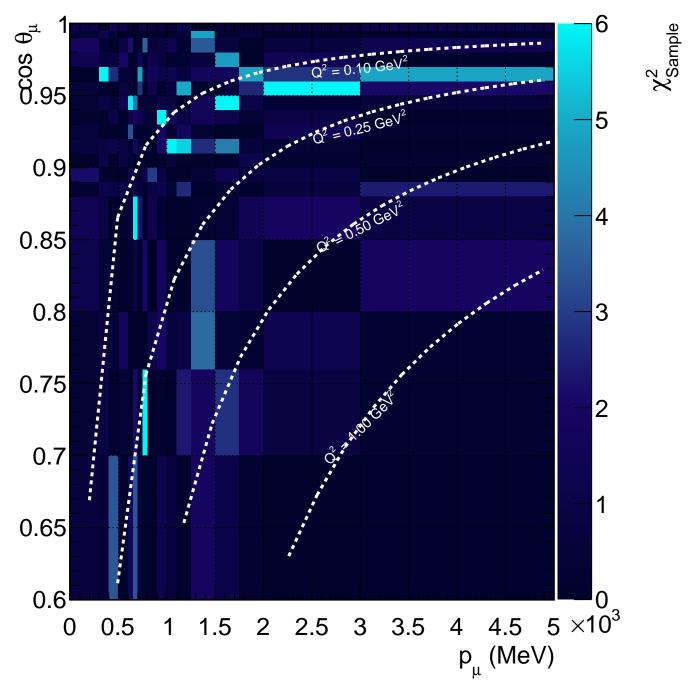
FGD2\_numuCC\_other\_mode\_ratio



## FGD2\_numuCC\_other\_MeanInL

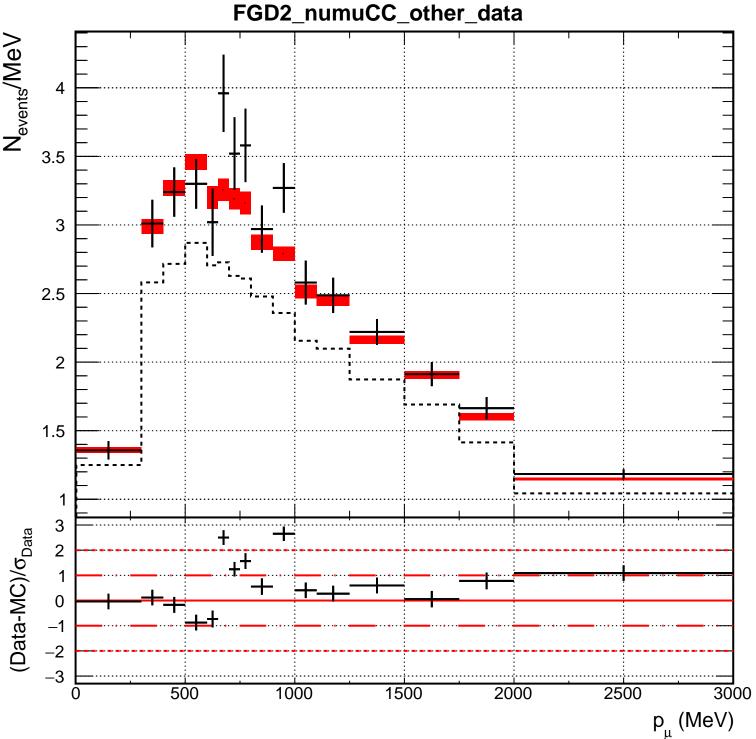


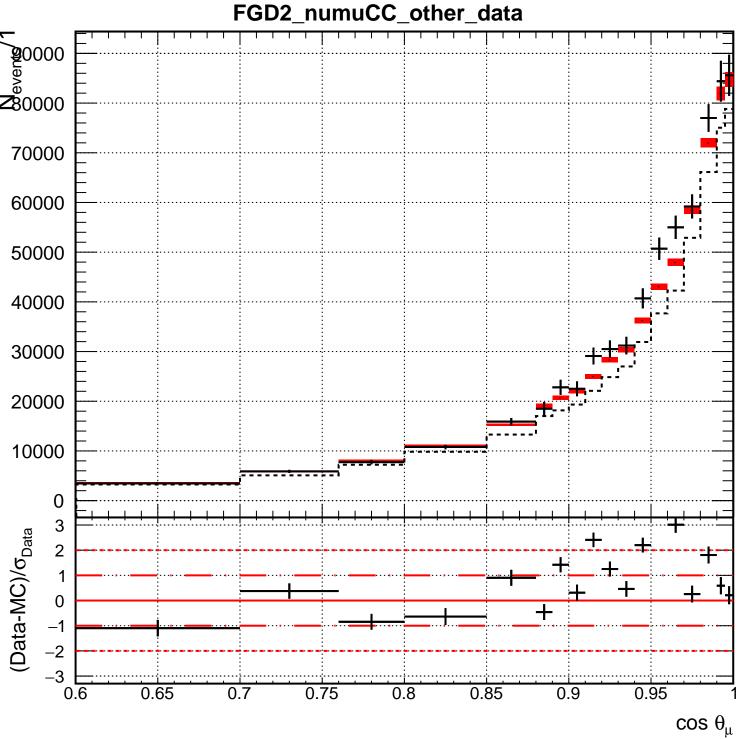
## FGD2\_numuCC\_other\_ModeInL

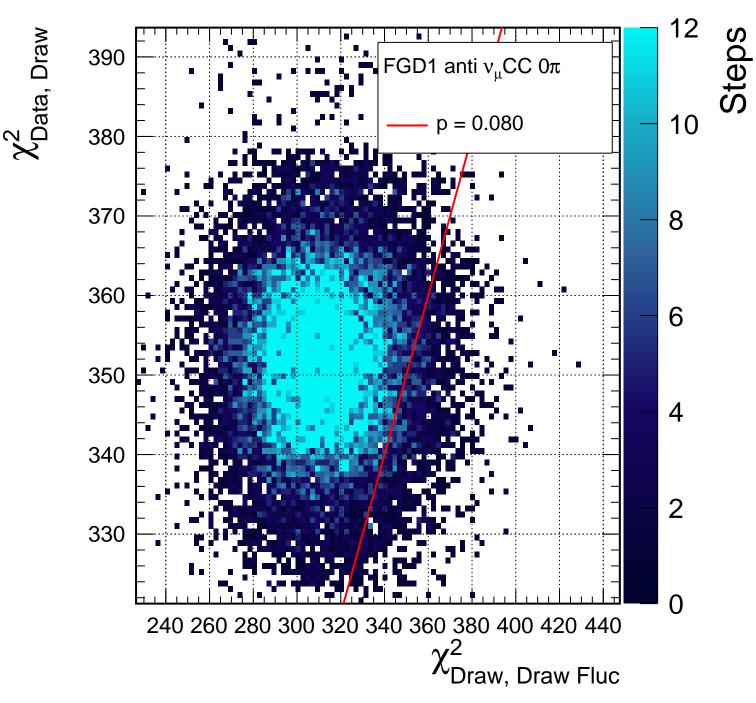


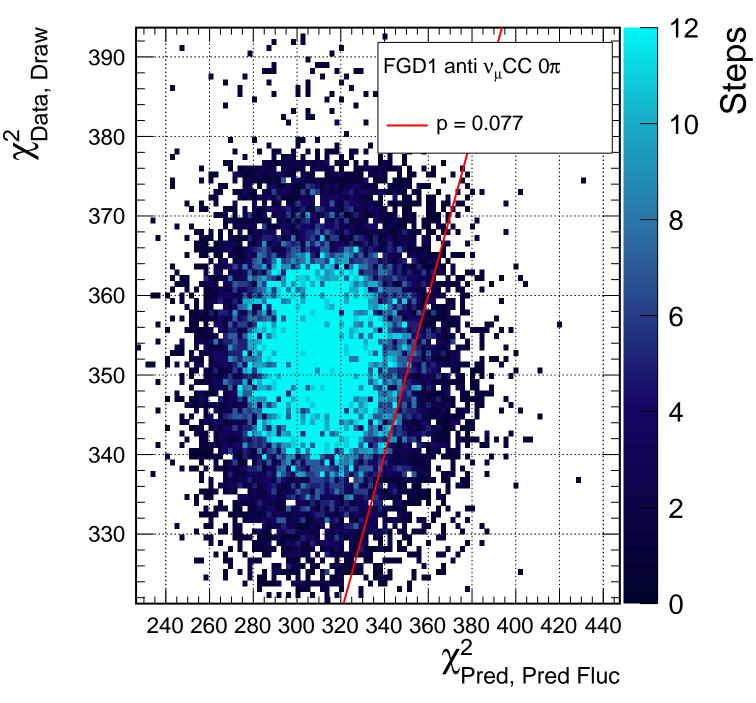
FGD2\_numuCC\_other\_sum\_7664 \$1800 1600 Data, 7664, p-value=0.00 MC,  $\mu$ =7420.9±69.8 Gauss,  $\mu$ =7421.0±69.4 

levents

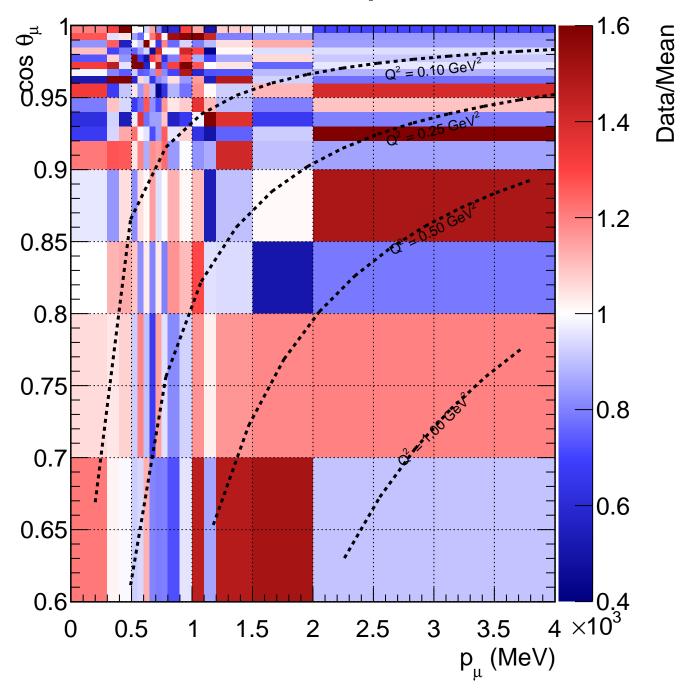




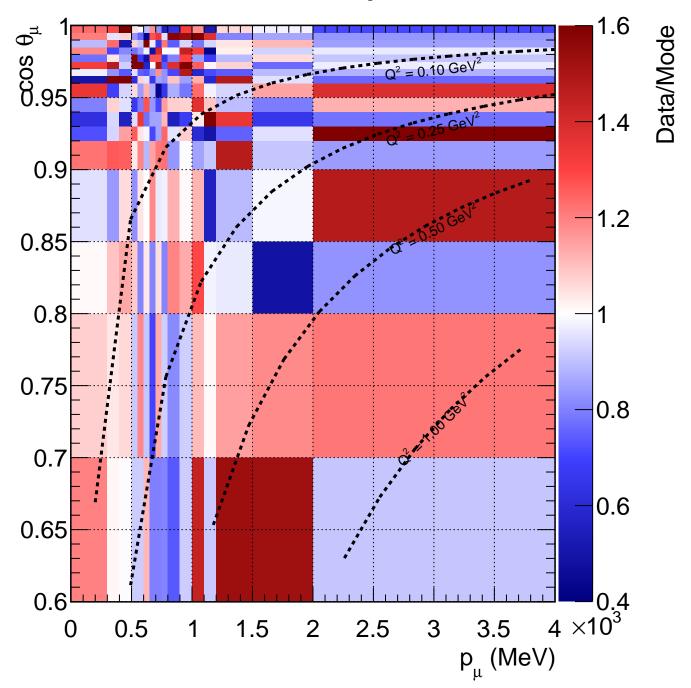




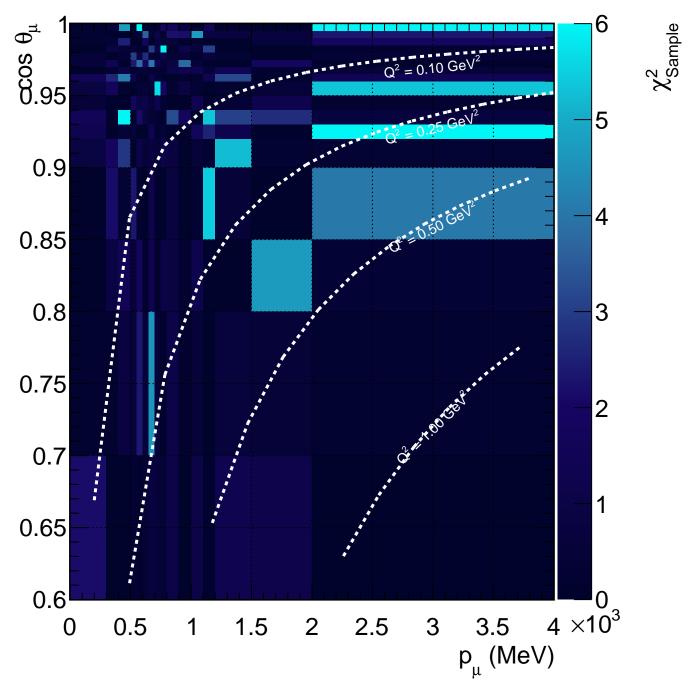
FGD1\_anti-numuCC\_0pi\_mean\_ratio



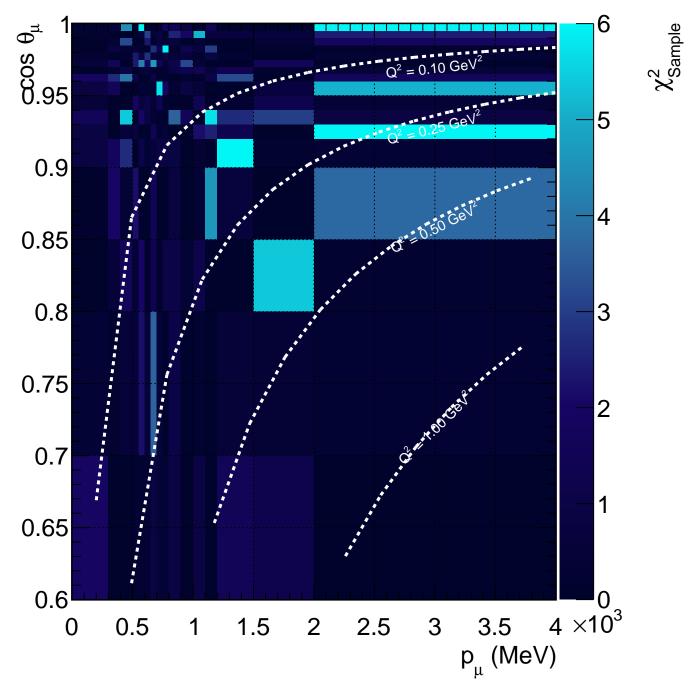
FGD1\_anti-numuCC\_0pi\_mode\_ratio

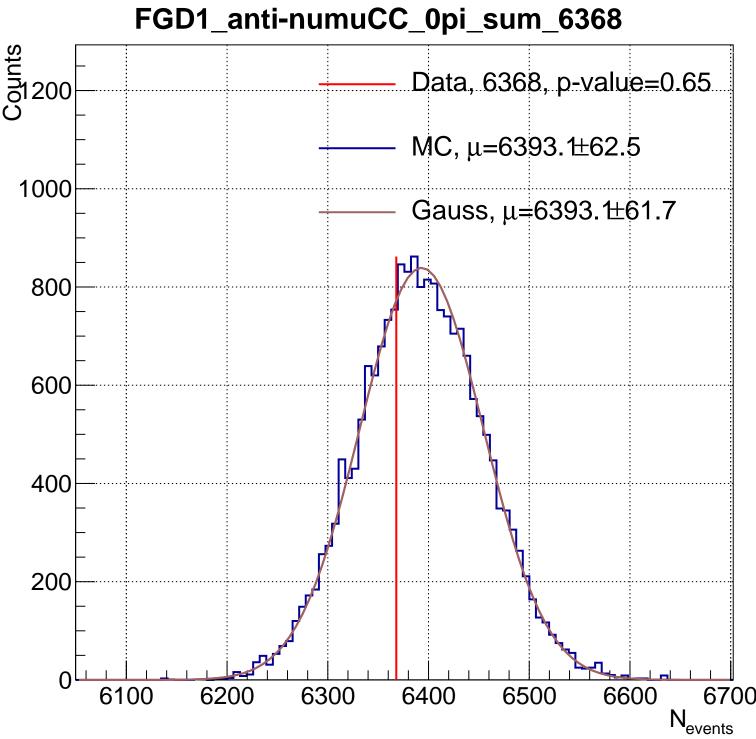


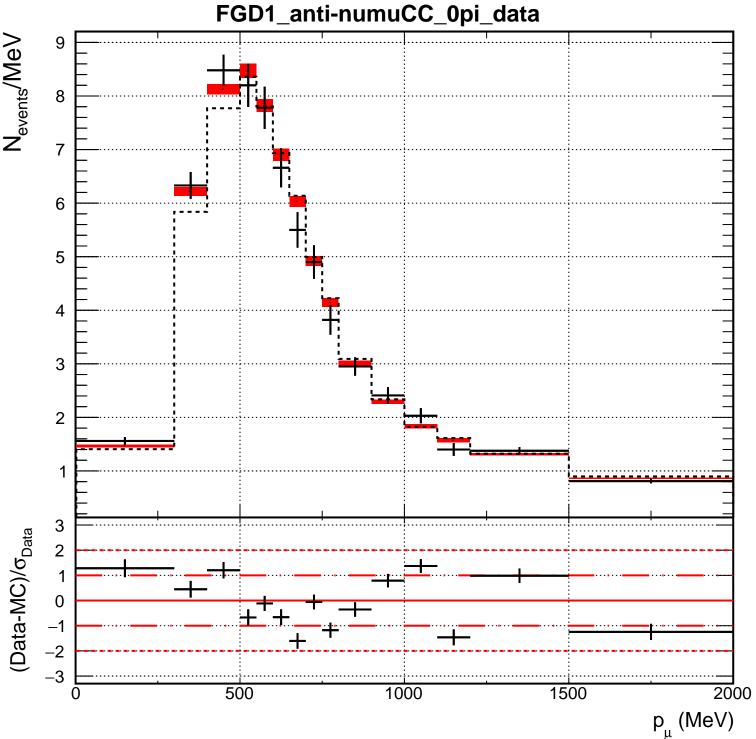
# FGD1\_anti-numuCC\_0pi\_MeanInL

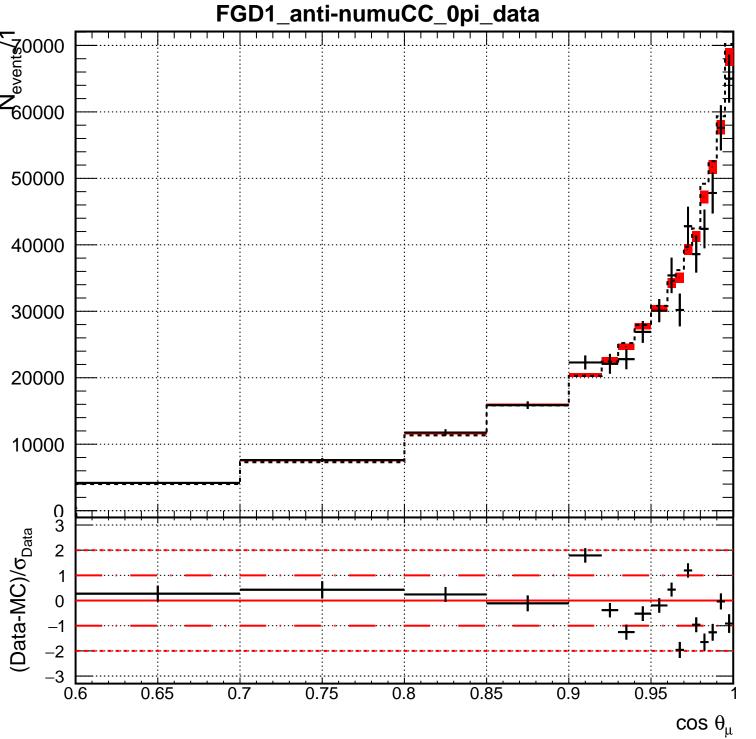


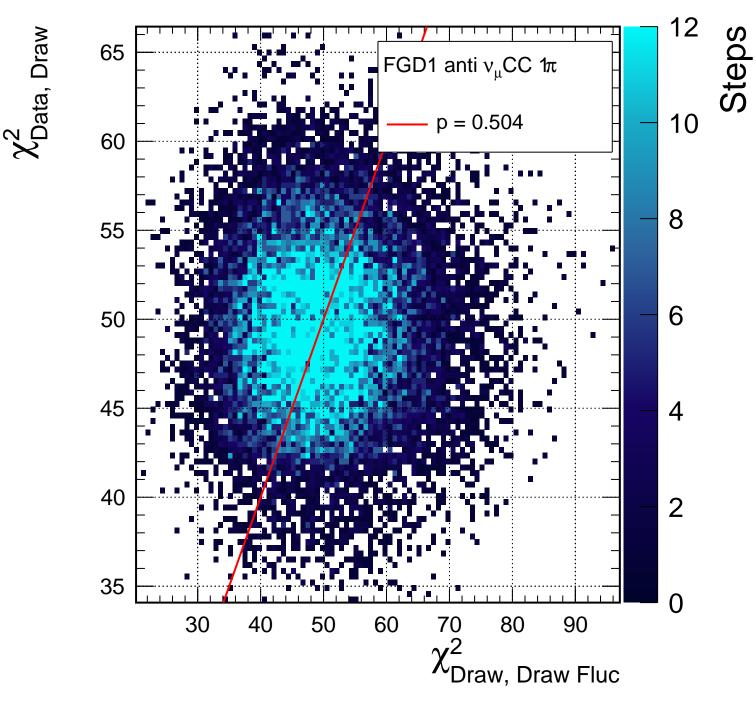
# FGD1\_anti-numuCC\_0pi\_ModeInL

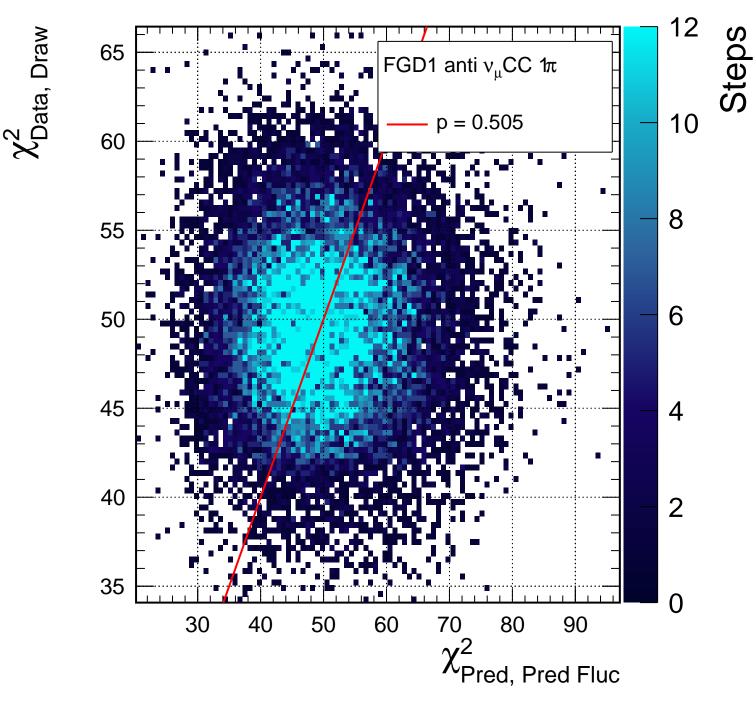




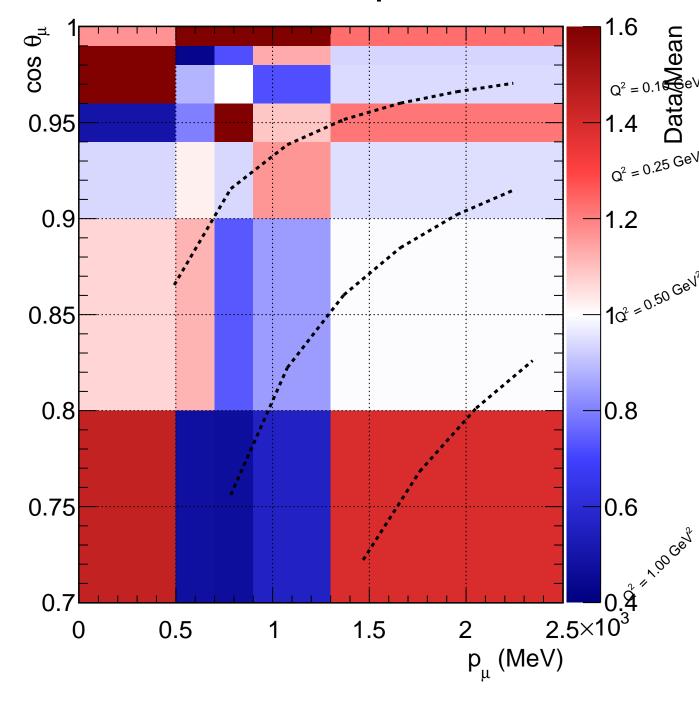




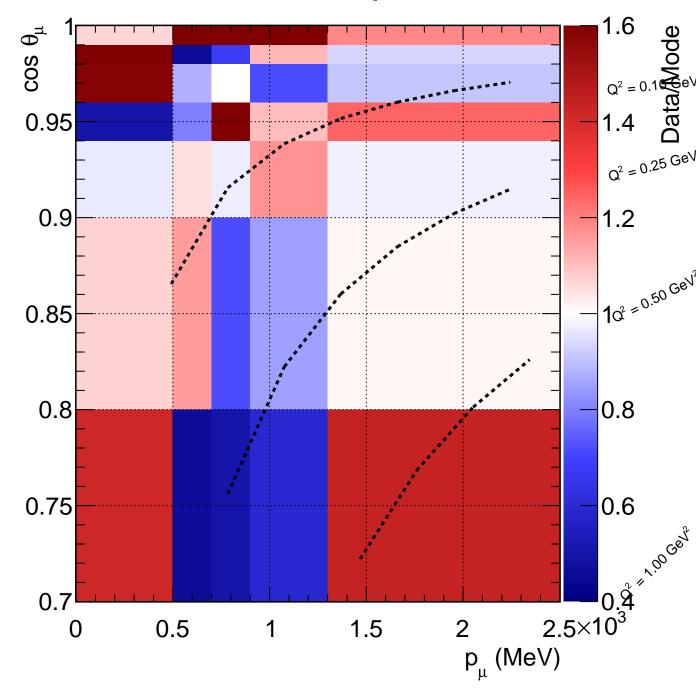




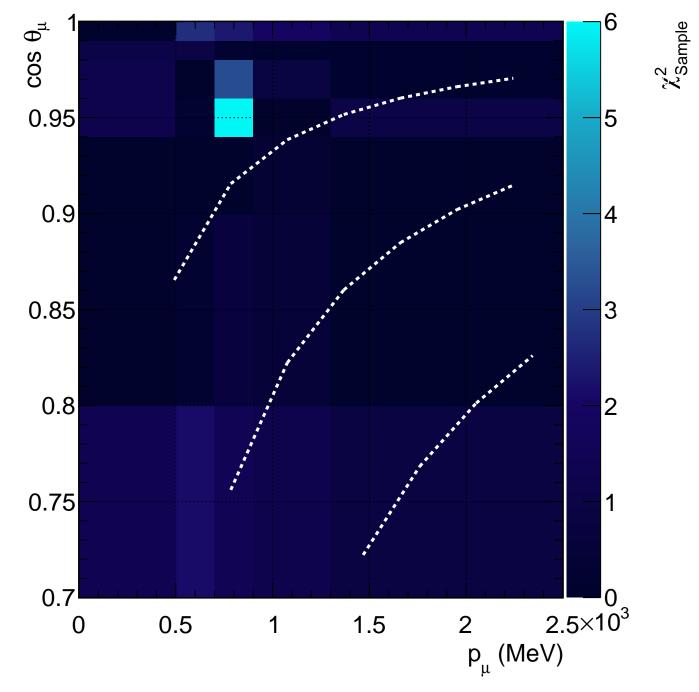
FGD1\_anti-numuCC\_1pi\_mean\_ratio



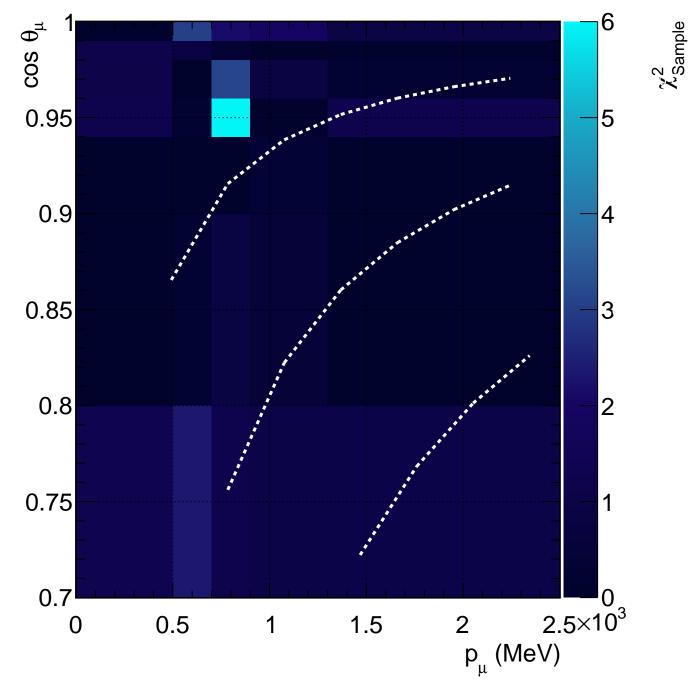
FGD1\_anti-numuCC\_1pi\_mode\_ratio



FGD1\_anti-numuCC\_1pi\_MeanInL

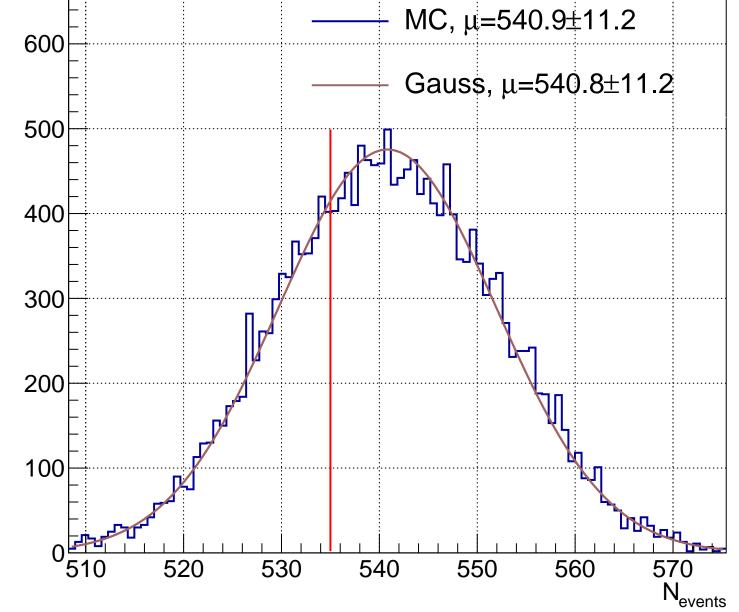


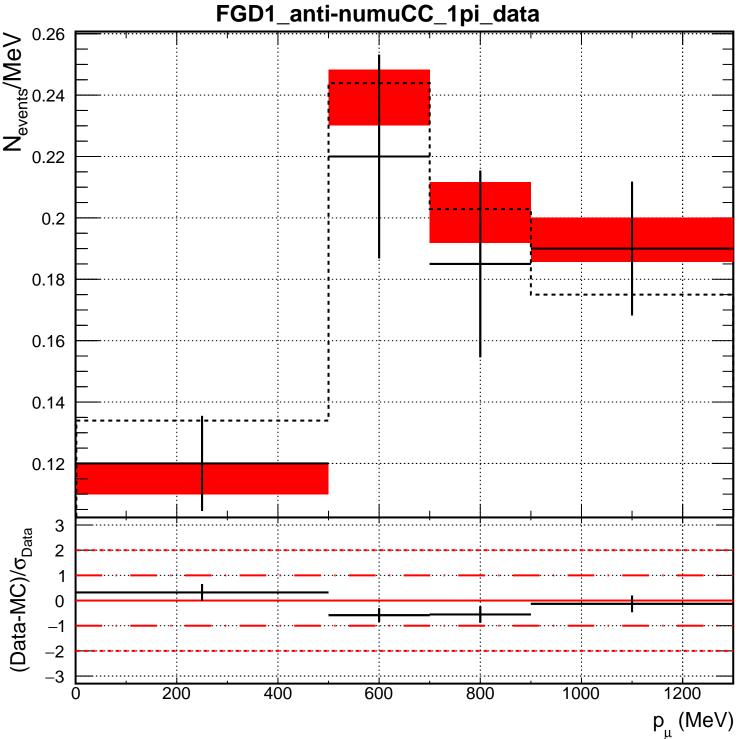
FGD1\_anti-numuCC\_1pi\_ModeInL

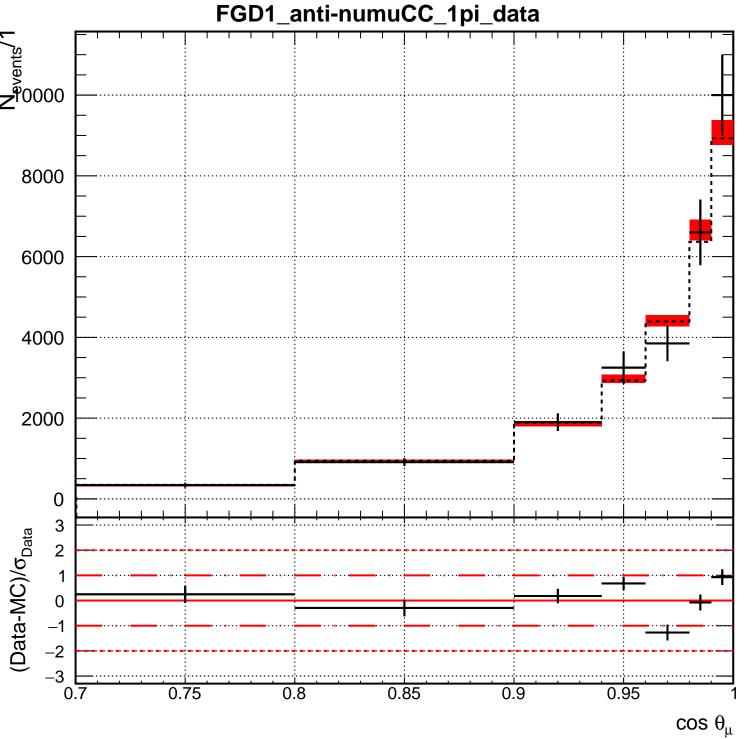


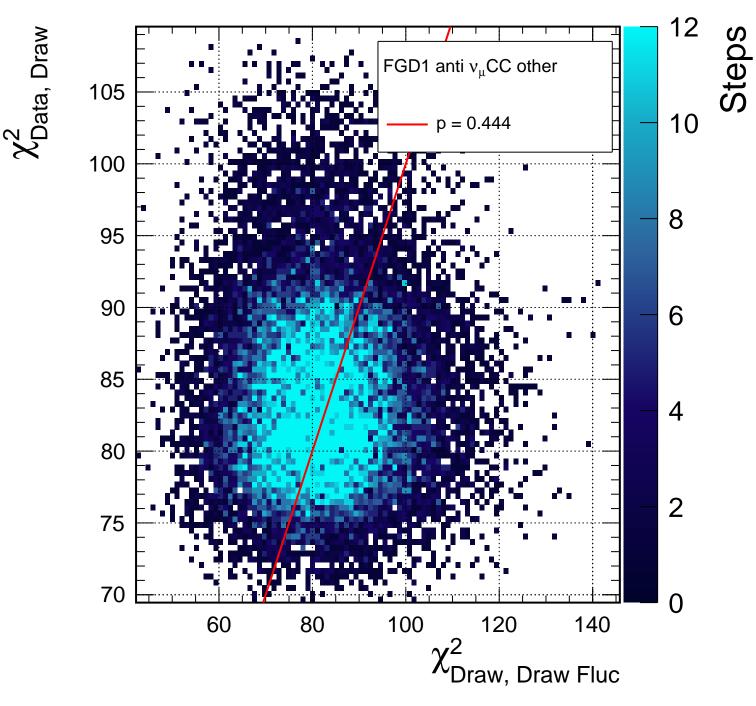
FGD1\_anti-numuCC\_1pi\_sum\_535 Data, 535, p-value=0.69 MC,  $\mu$ =540.9±11.2 Gauss,  $\mu$ =540.8±11.2

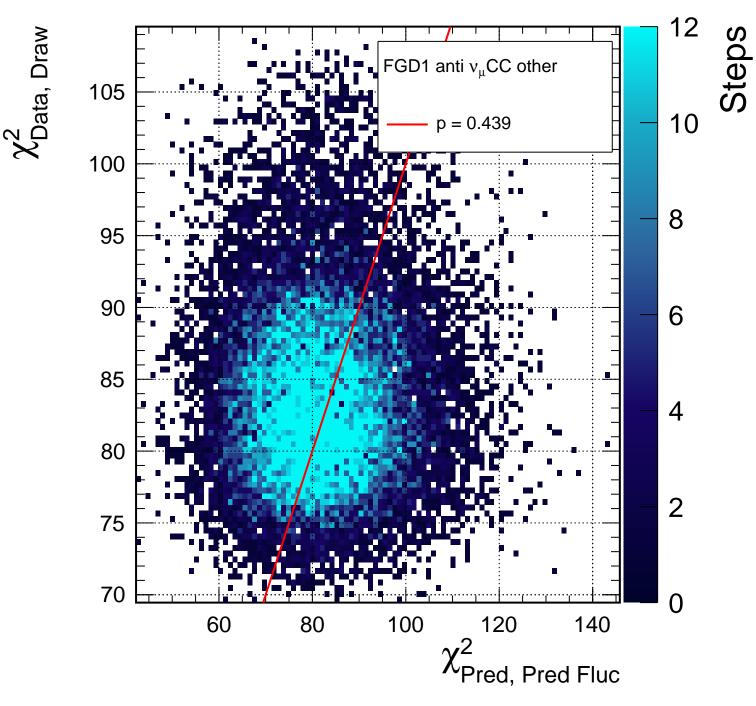
700



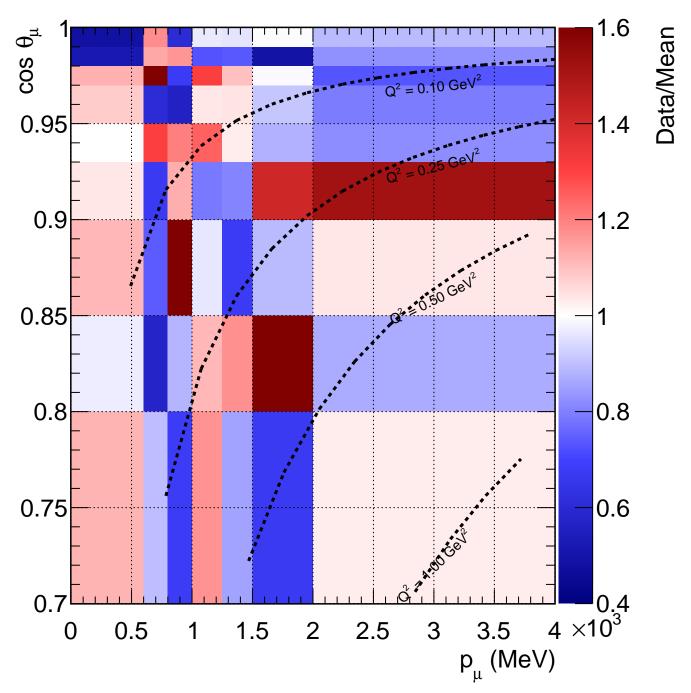




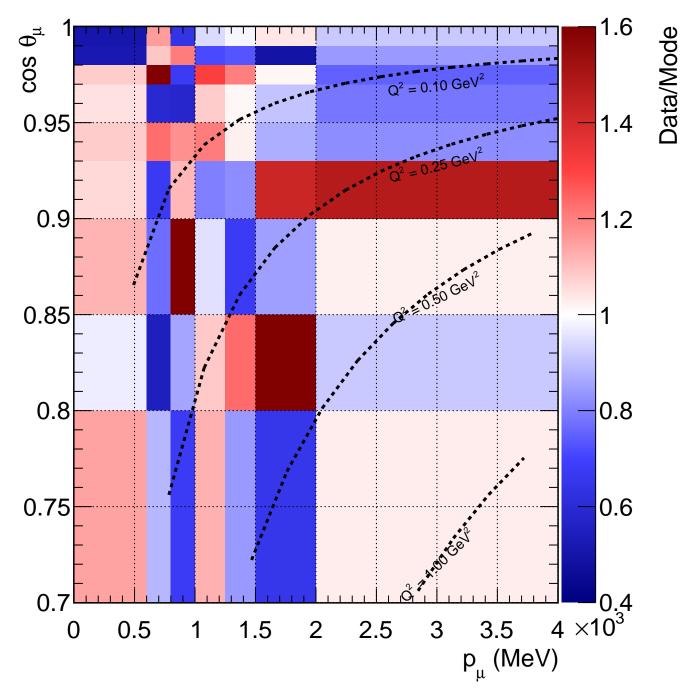




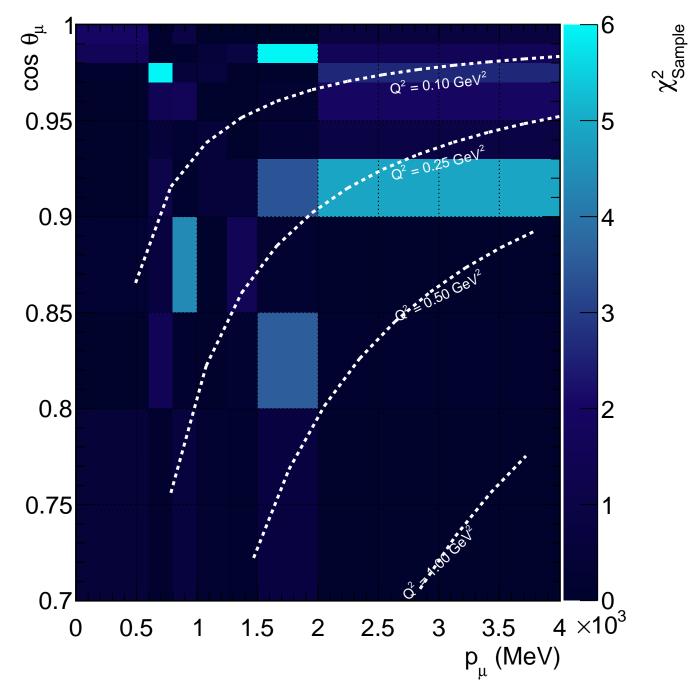
FGD1\_anti-numuCC\_other\_mean\_ratio



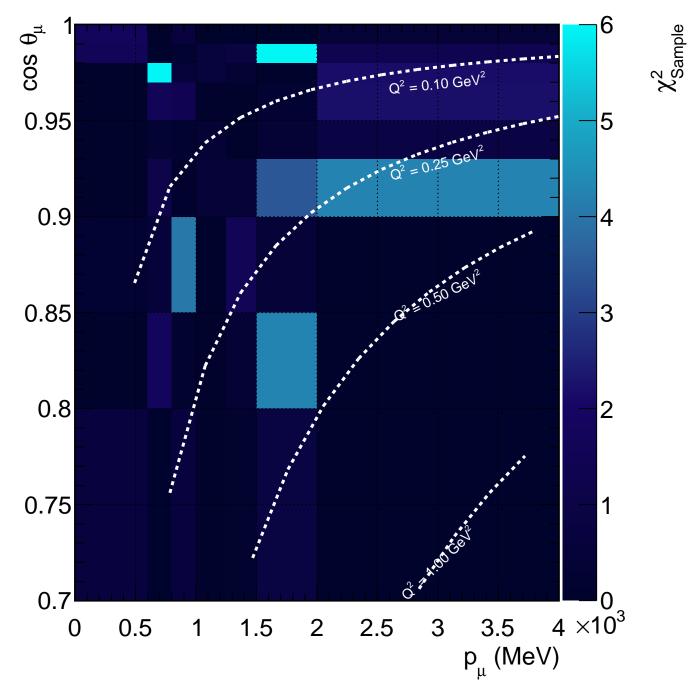
FGD1\_anti-numuCC\_other\_mode\_ratio



FGD1\_anti-numuCC\_other\_MeanInL

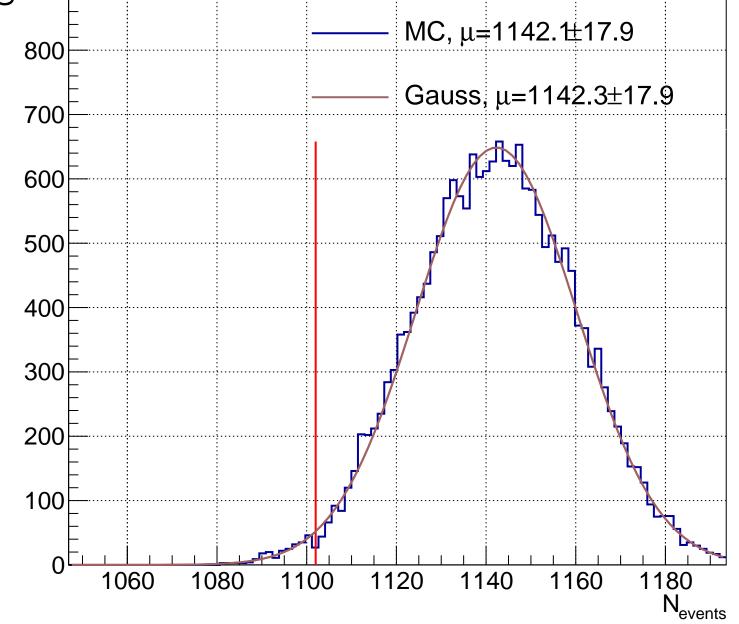


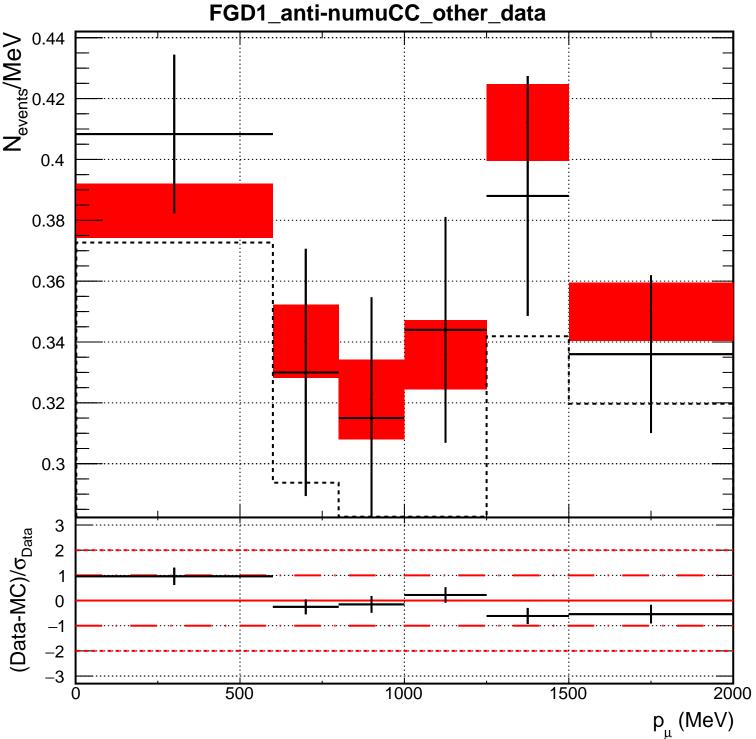
FGD1\_anti-numuCC\_other\_ModeInL

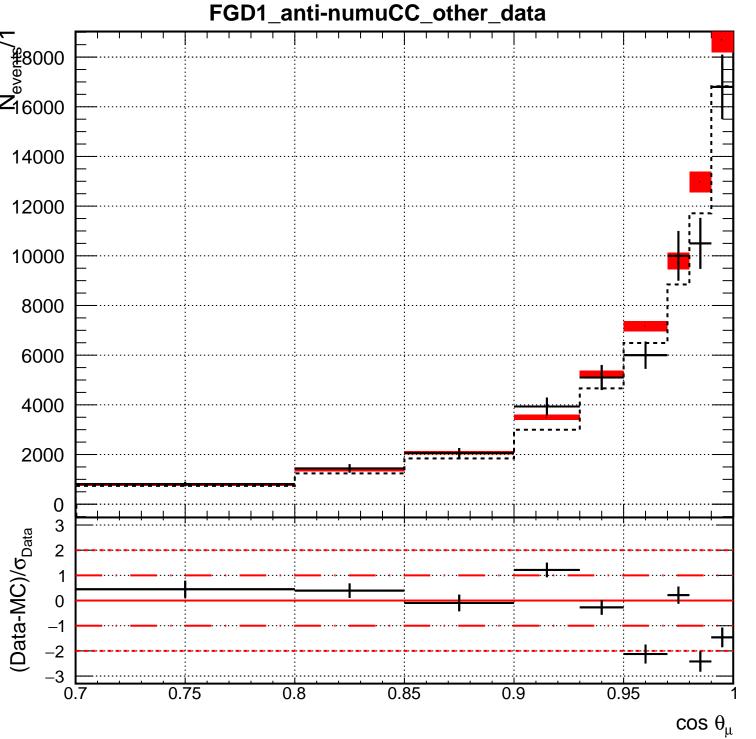


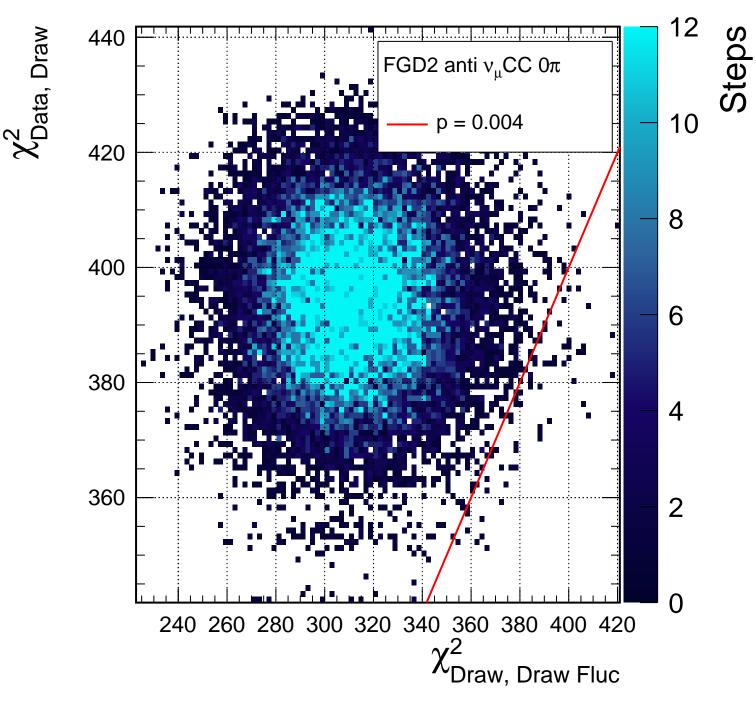
FGD1\_anti-numuCC\_other\_sum\_1102 Data, 1102, p-value=0.99 MC,  $\mu$ =1142.1±17.9 Gauss,  $\mu$ =1142.3±17.9

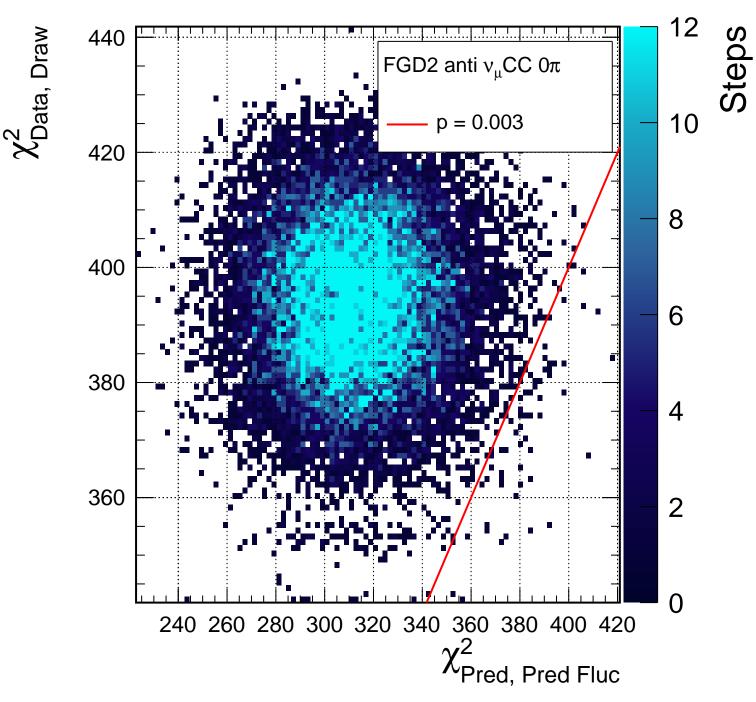
900



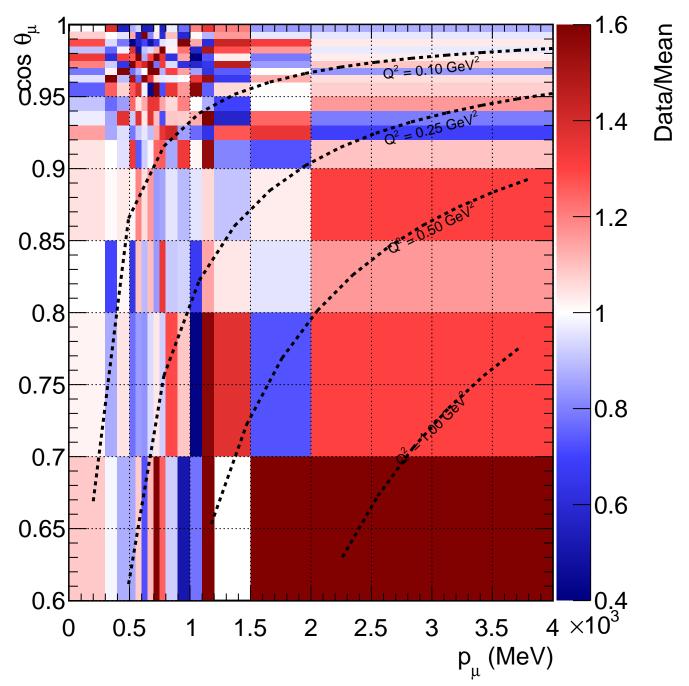




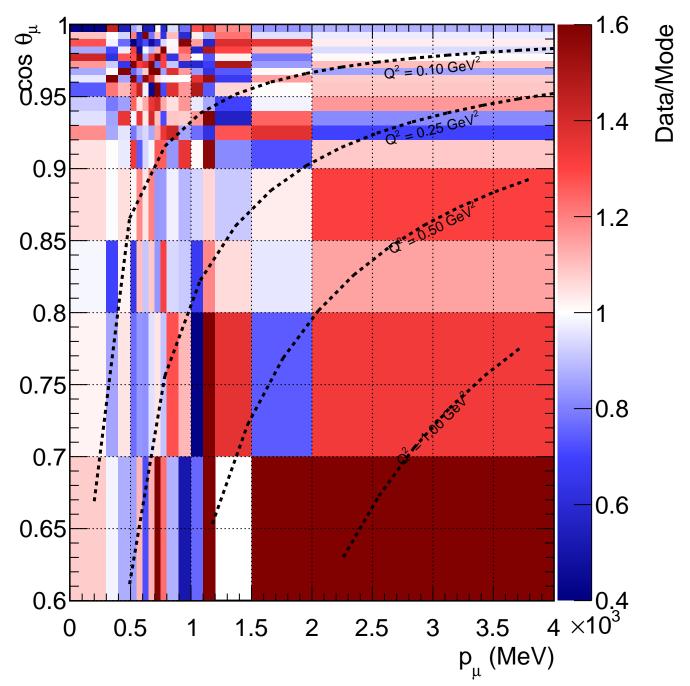




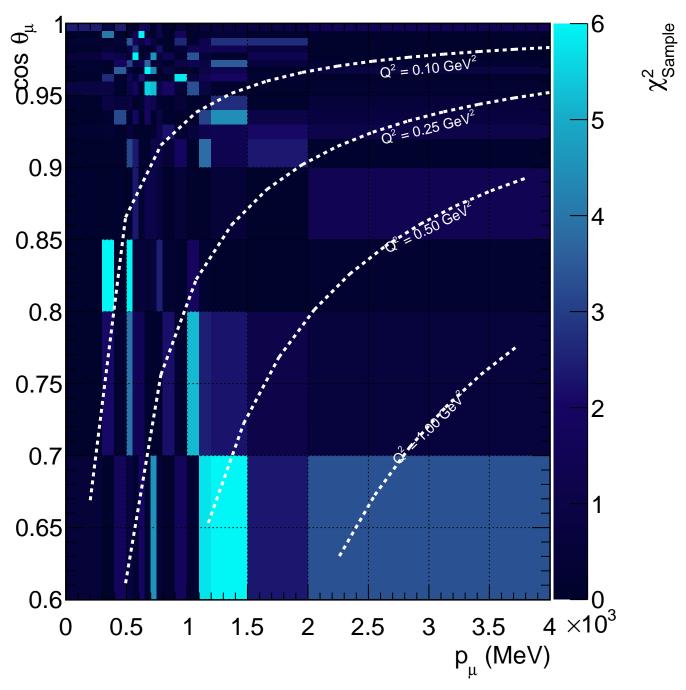
FGD2\_anti-numuCC\_0pi\_mean\_ratio



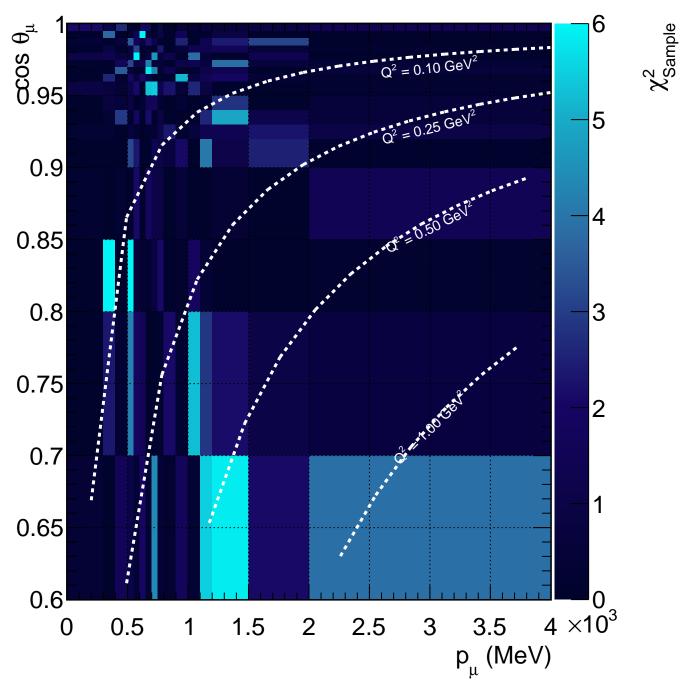
FGD2\_anti-numuCC\_0pi\_mode\_ratio



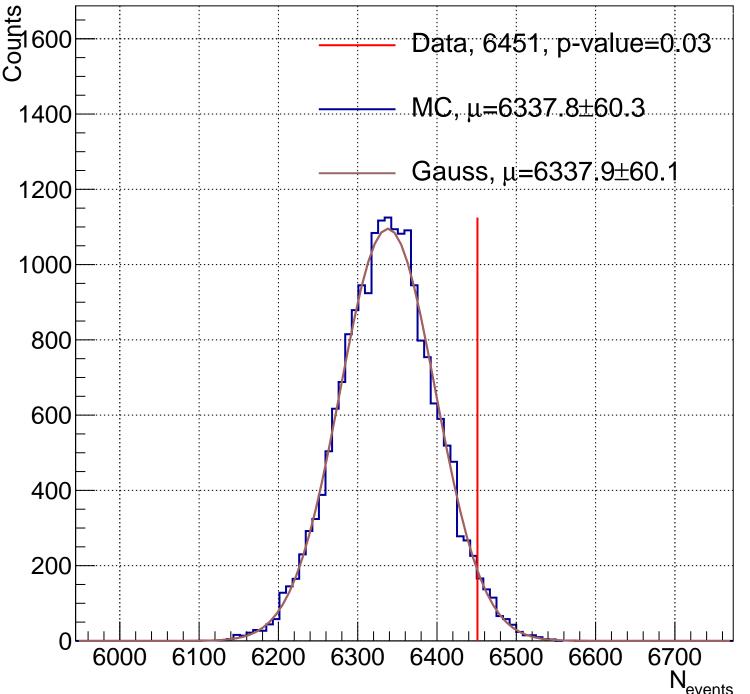
# FGD2\_anti-numuCC\_0pi\_MeanInL

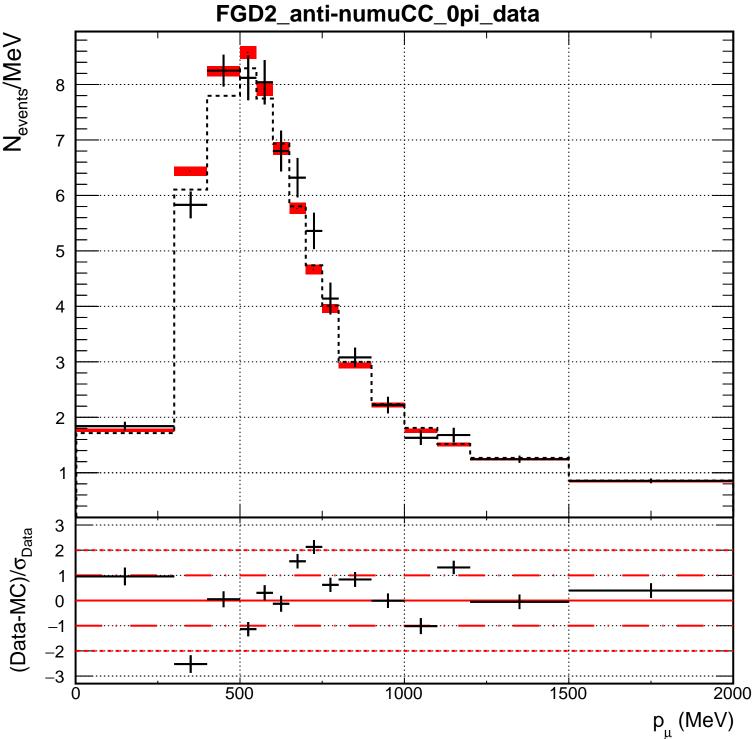


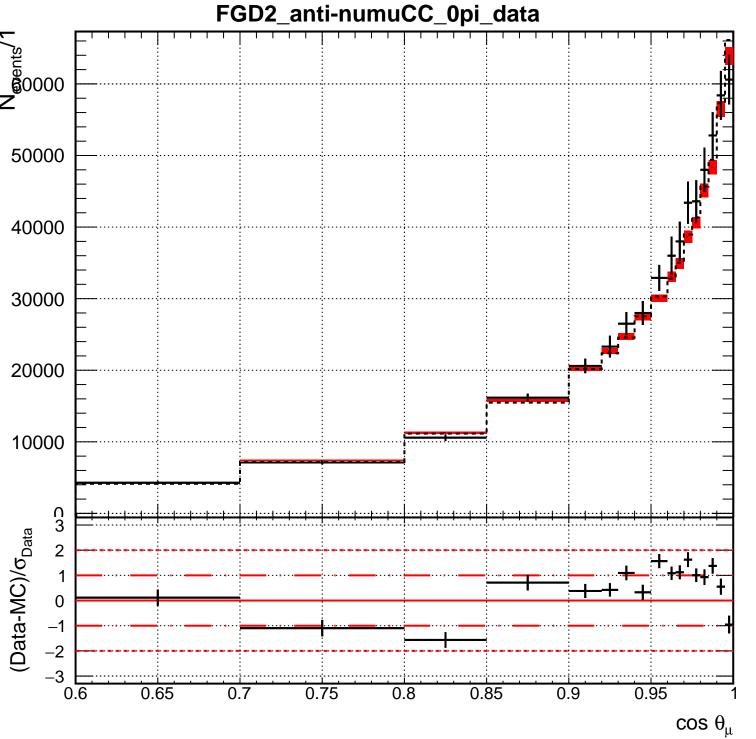
# FGD2\_anti-numuCC\_0pi\_ModeInL

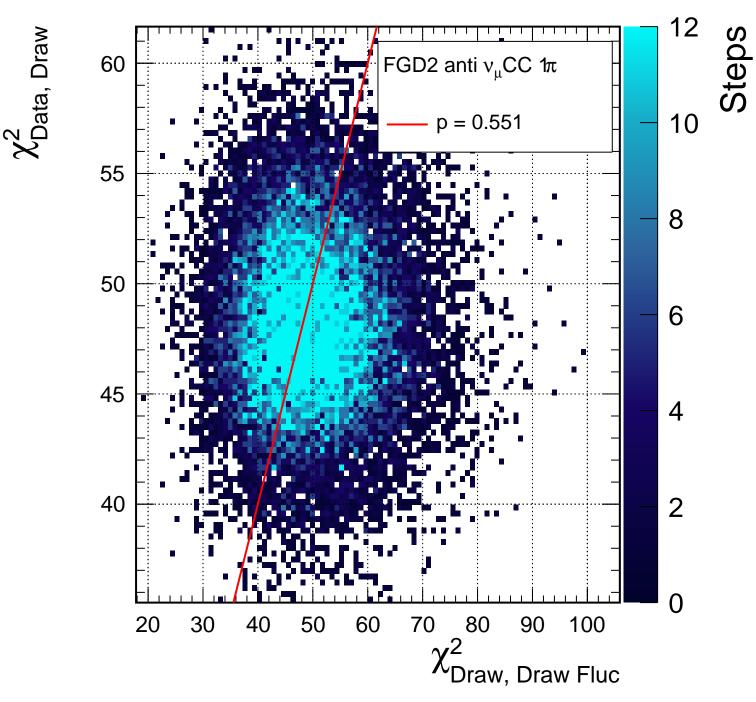


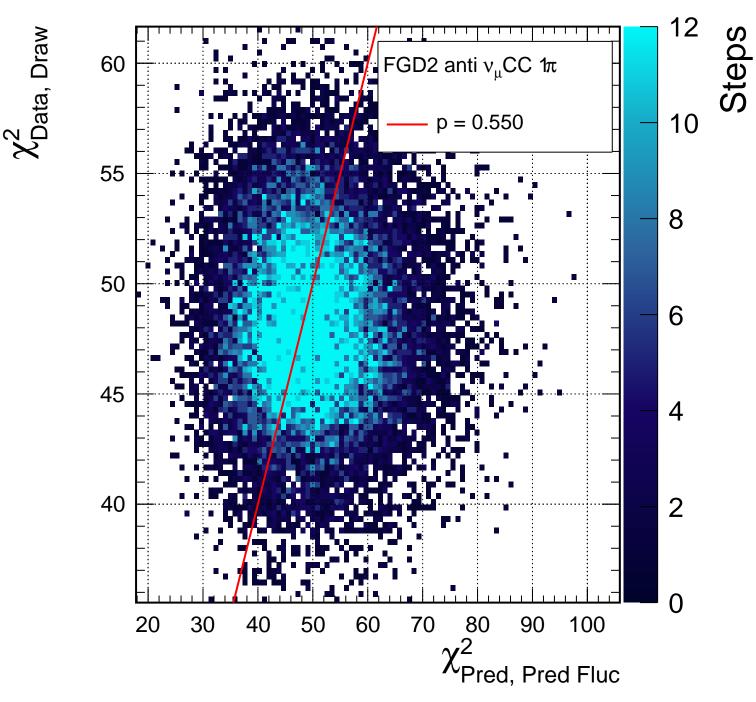
FGD2\_anti-numuCC\_0pi\_sum\_6451



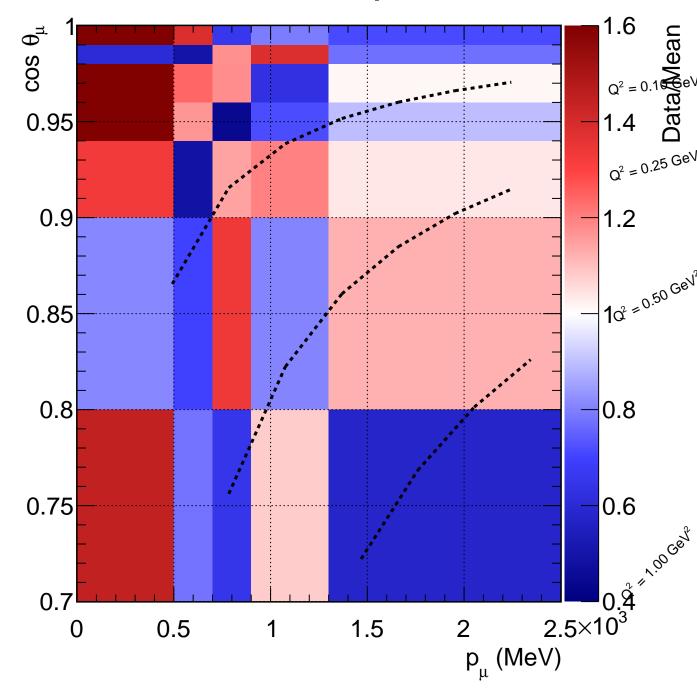




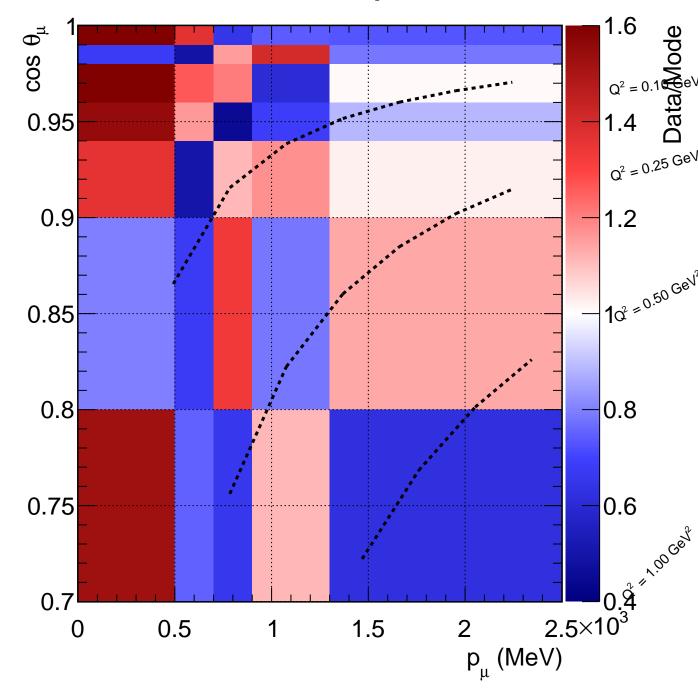




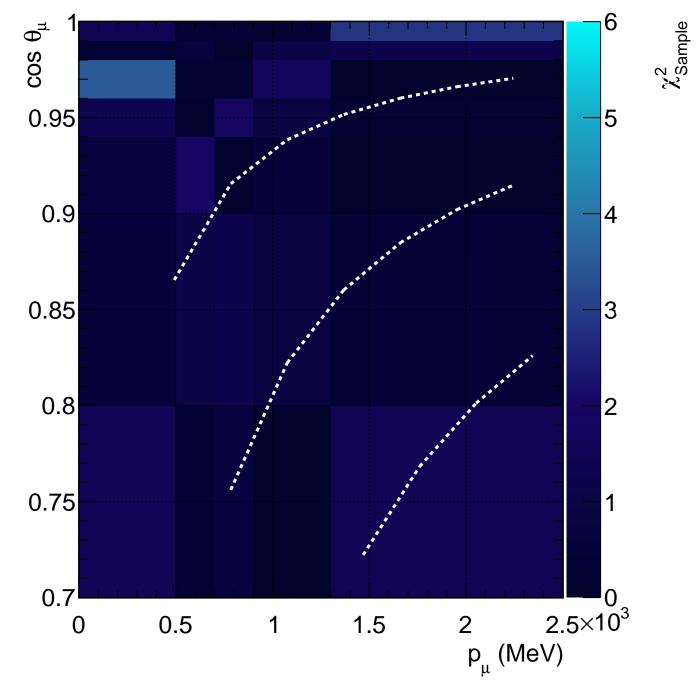
FGD2\_anti-numuCC\_1pi\_mean\_ratio



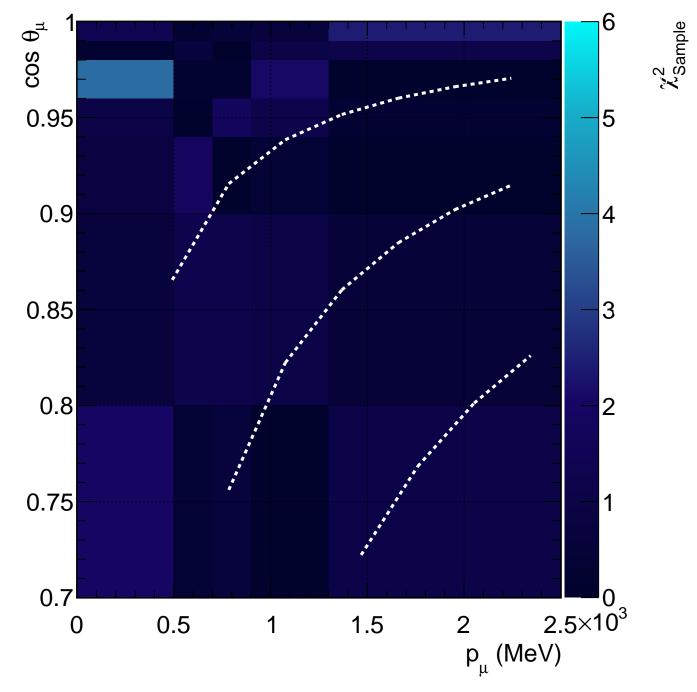
FGD2\_anti-numuCC\_1pi\_mode\_ratio



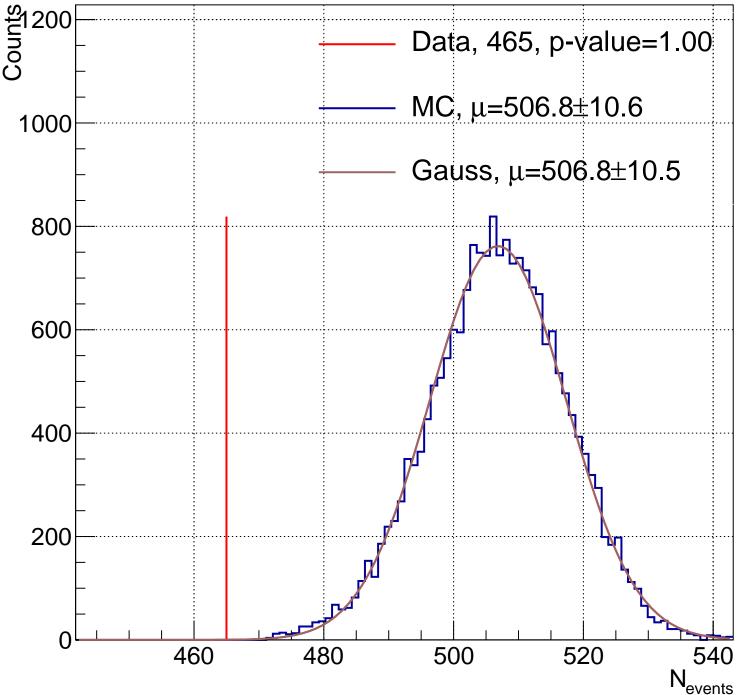
# FGD2\_anti-numuCC\_1pi\_MeanInL

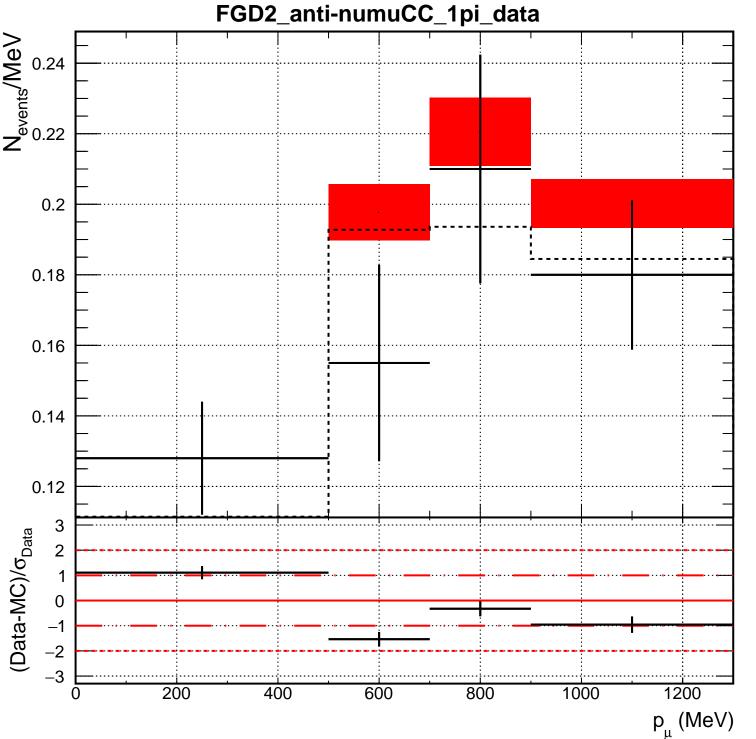


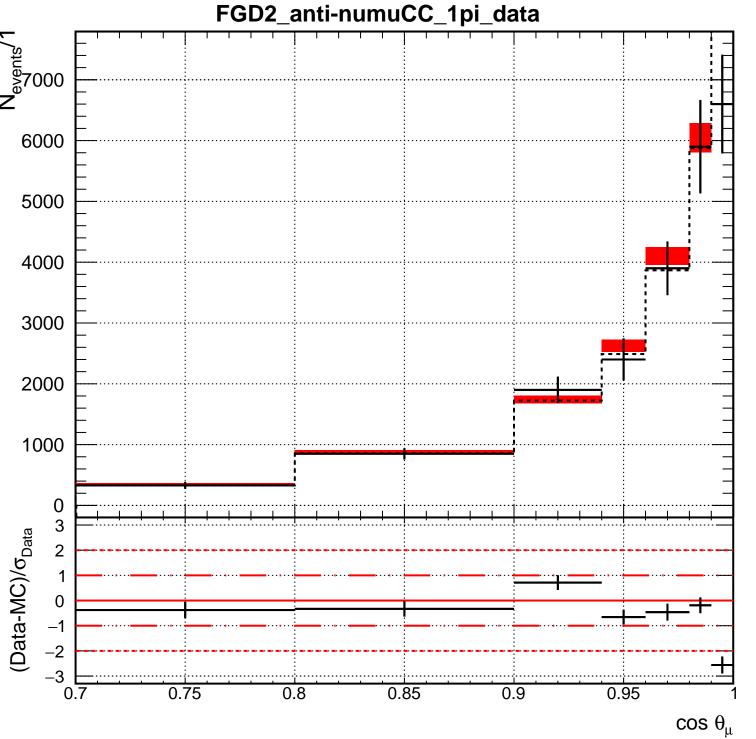
# FGD2\_anti-numuCC\_1pi\_ModeInL

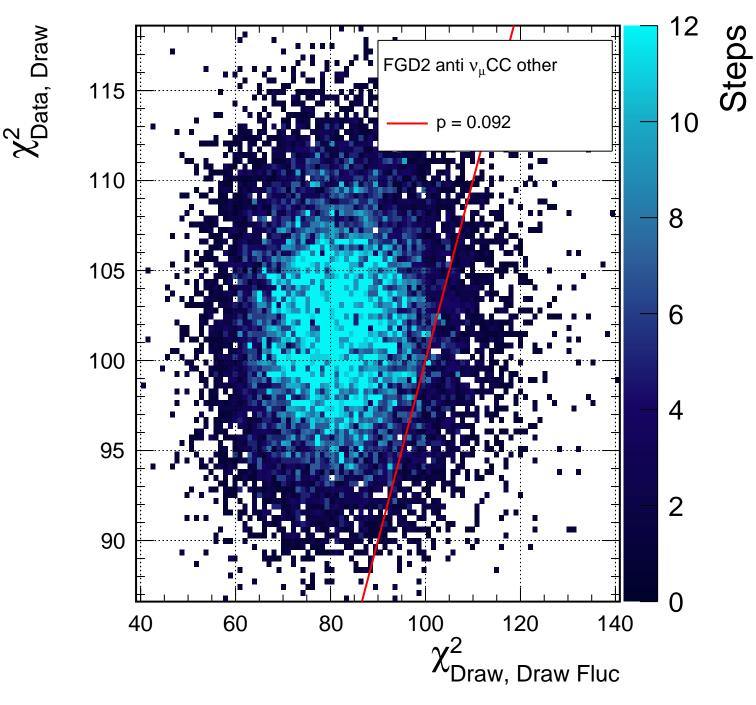


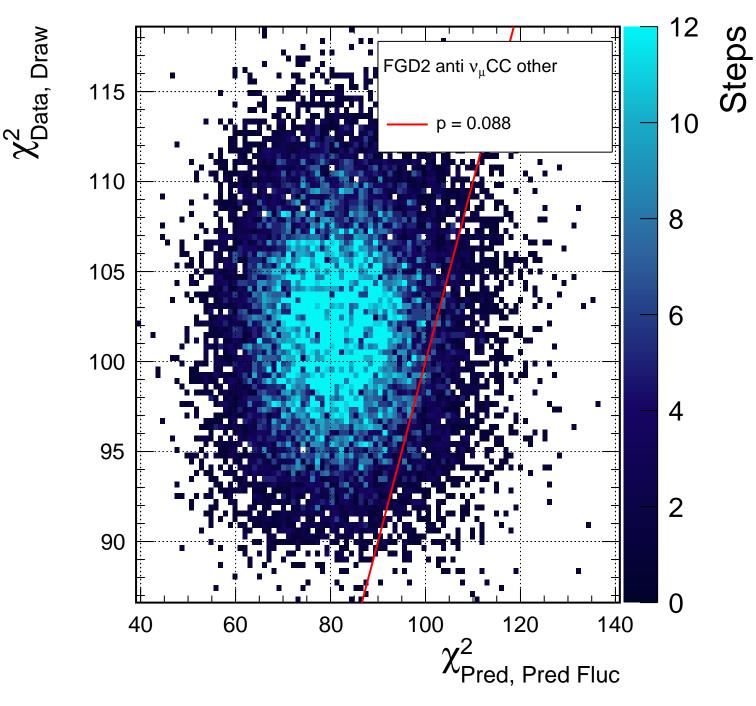
FGD2\_anti-numuCC\_1pi\_sum\_465



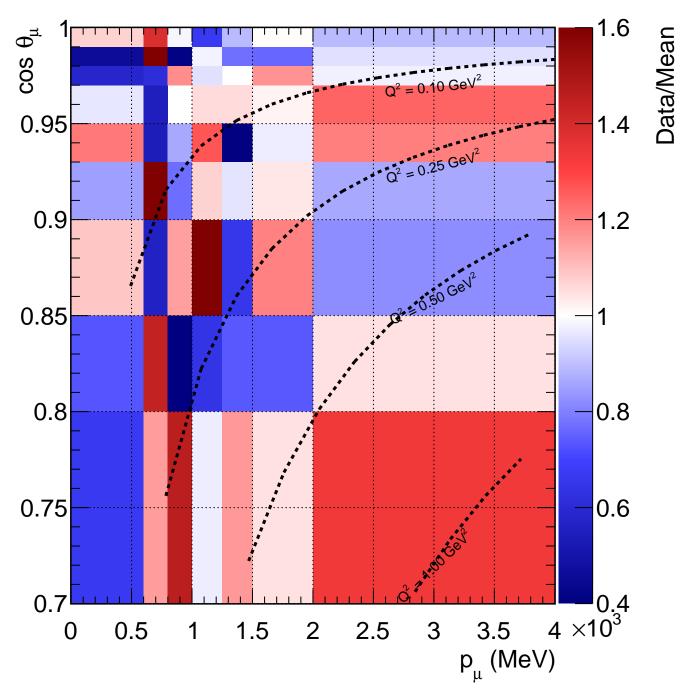




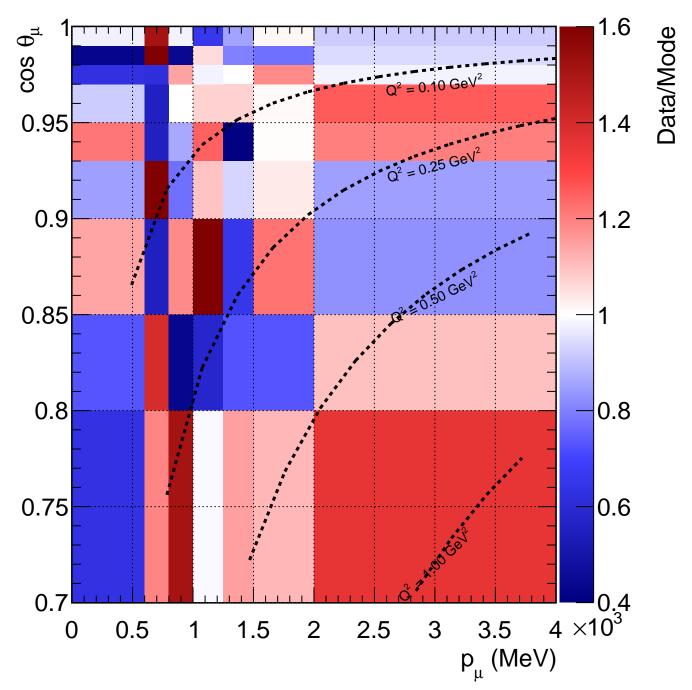




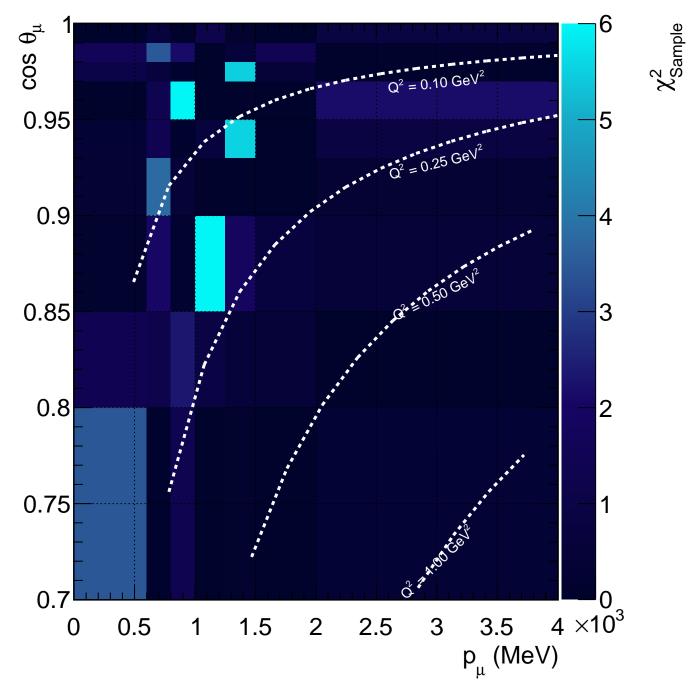
FGD2\_anti-numuCC\_other\_mean\_ratio



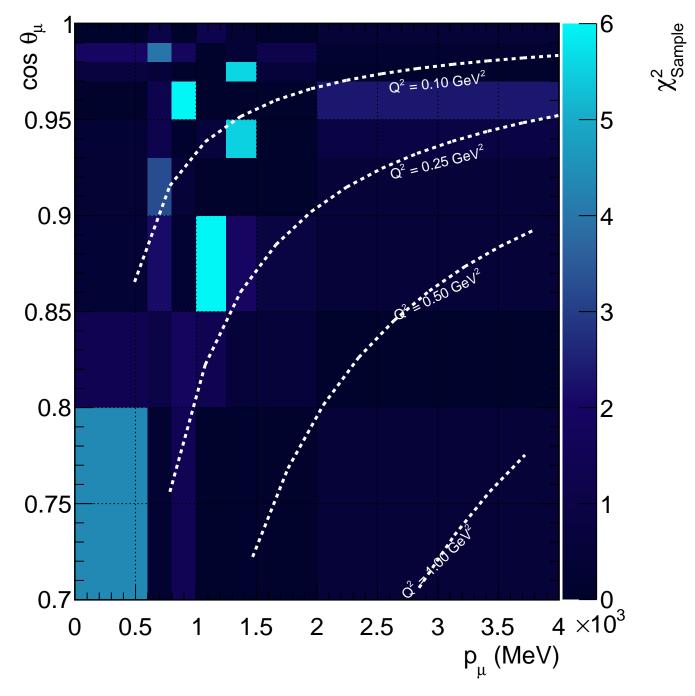
FGD2\_anti-numuCC\_other\_mode\_ratio



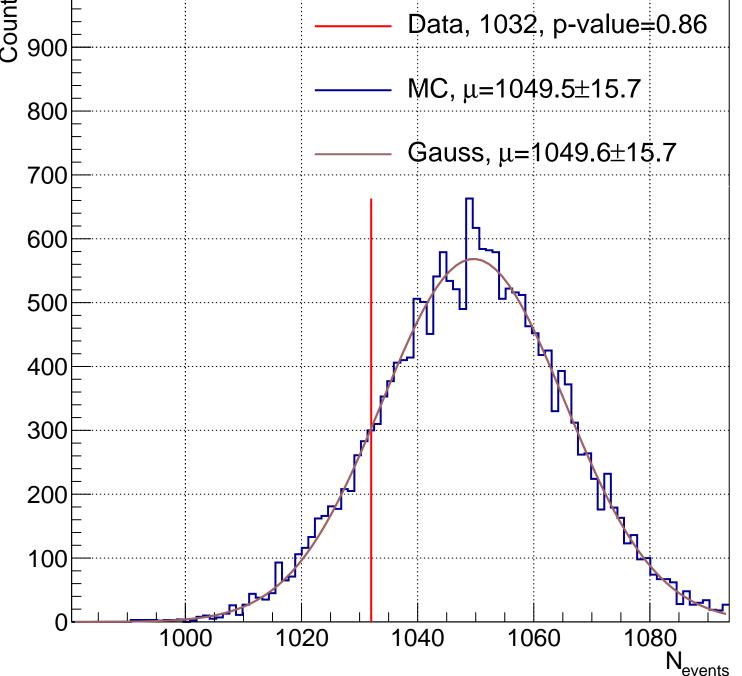
FGD2\_anti-numuCC\_other\_MeanInL

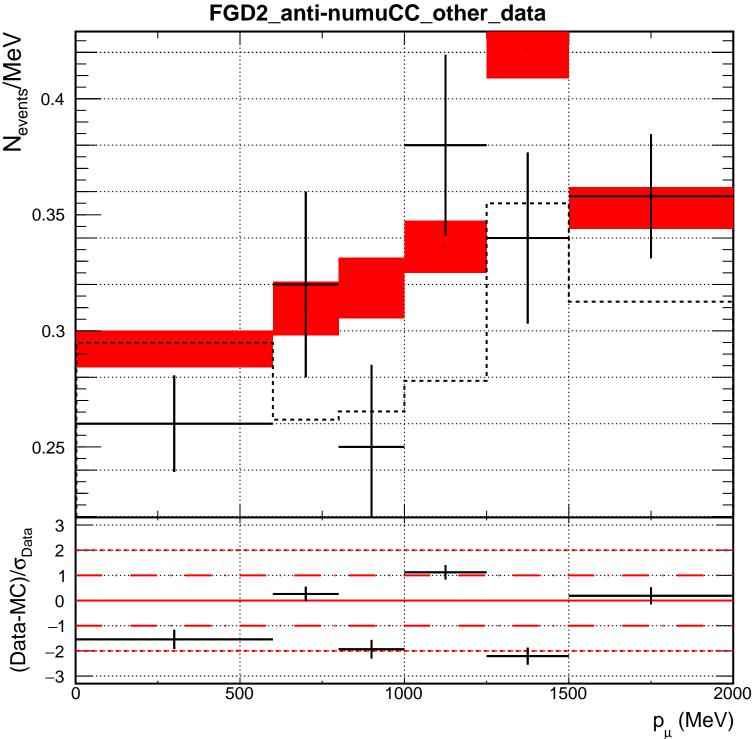


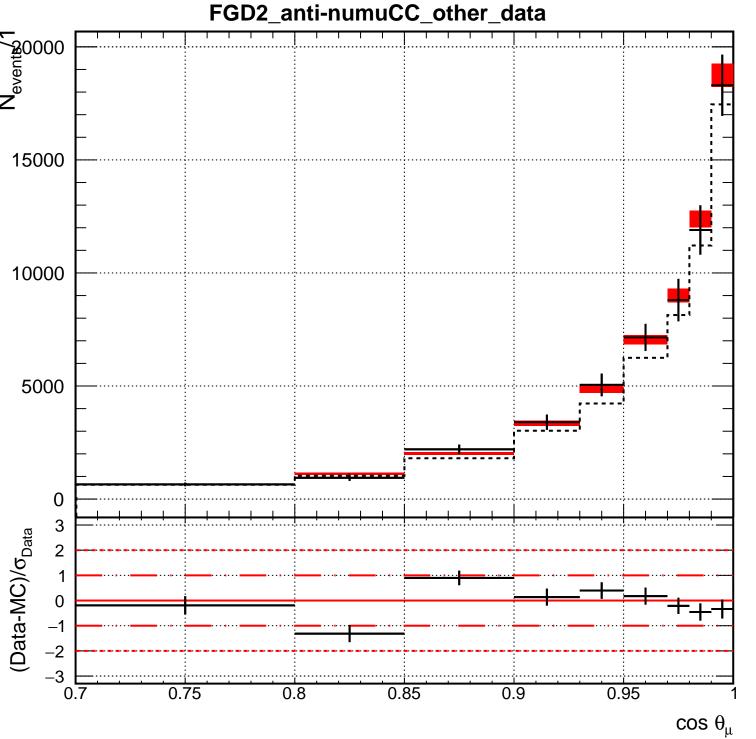
FGD2\_anti-numuCC\_other\_ModeInL

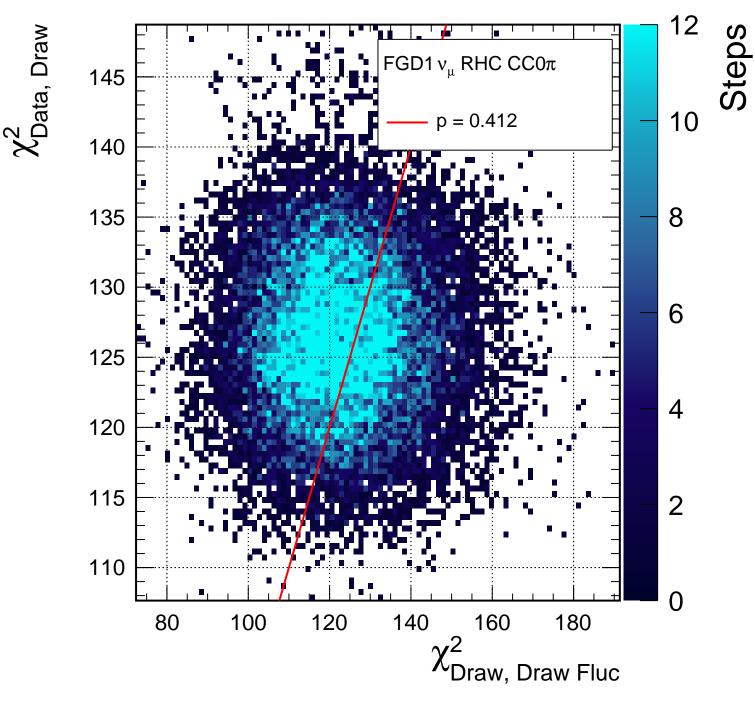


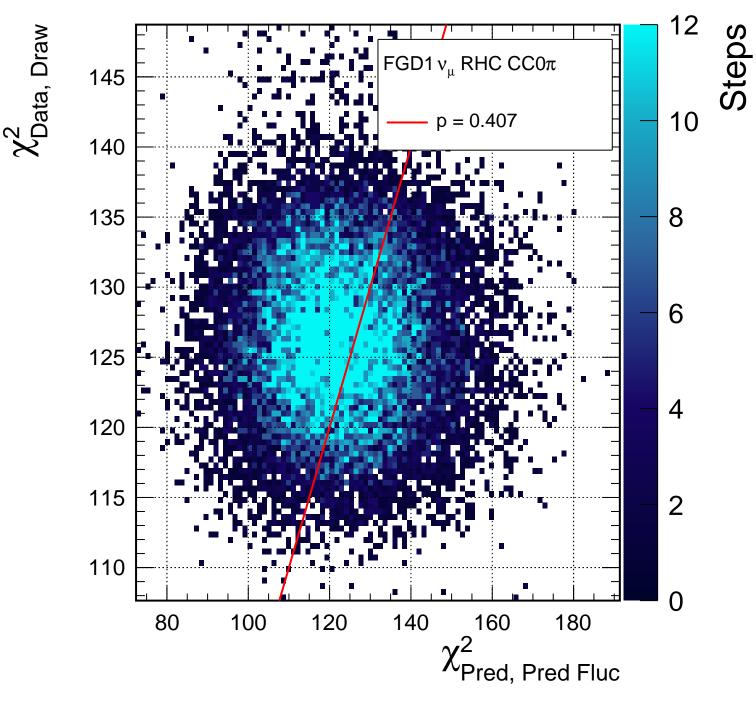
FGD2\_anti-numuCC\_other\_sum\_1032



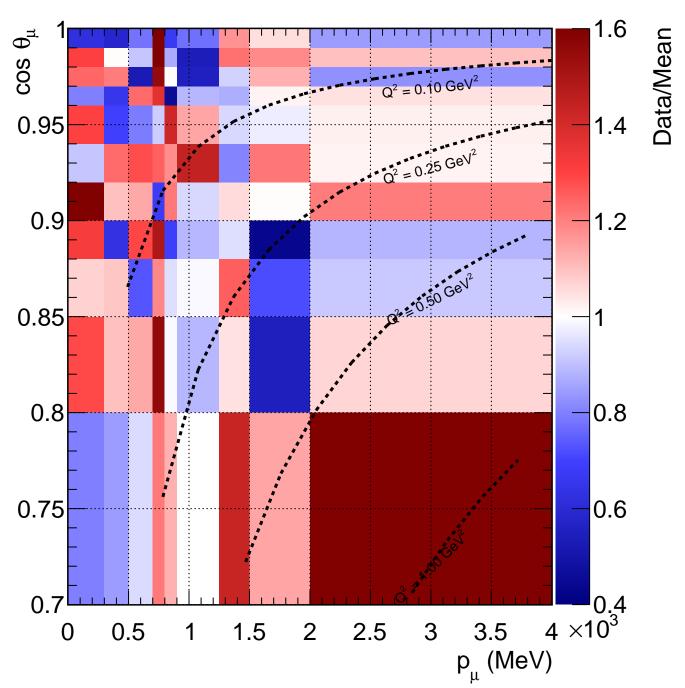




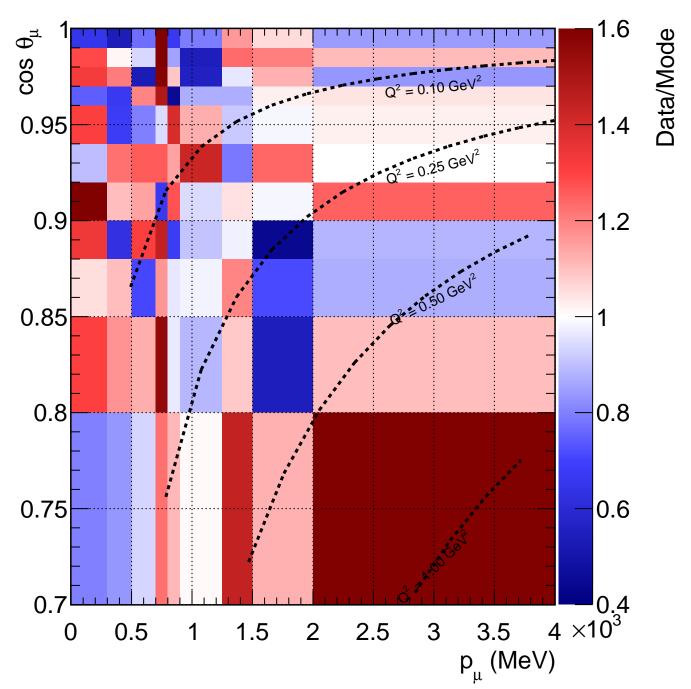




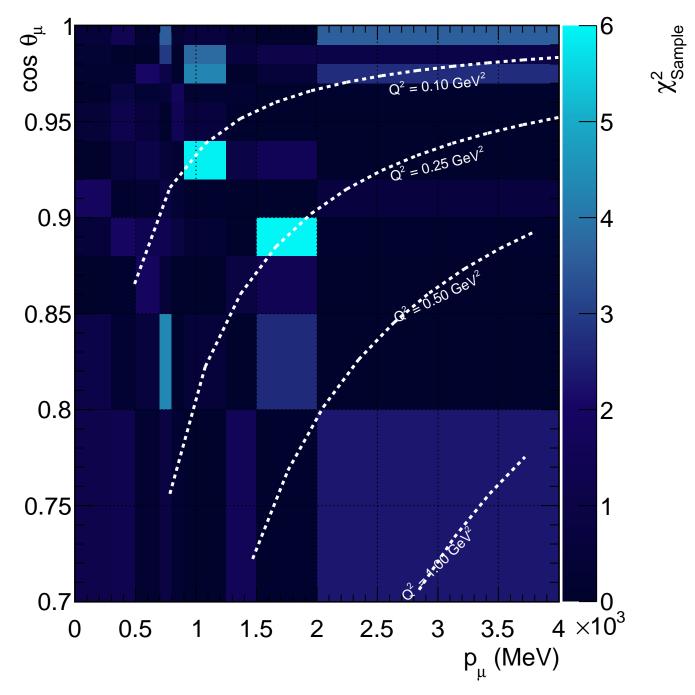
 $FGD1\_NuMuBkg\_CC0pi\_in\_AntiNu\_Mode\_mean\_ratio$ 



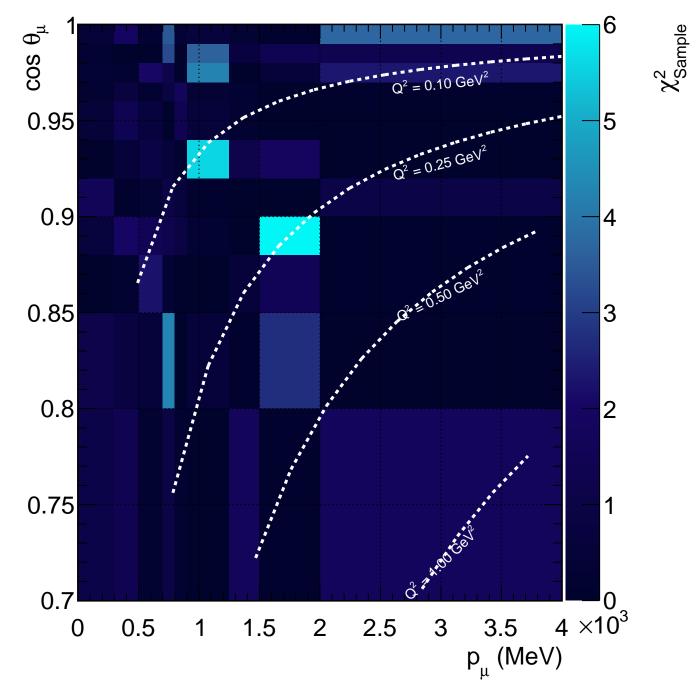
FGD1\_NuMuBkg\_CC0pi\_in\_AntiNu\_Mode\_mode\_ratio

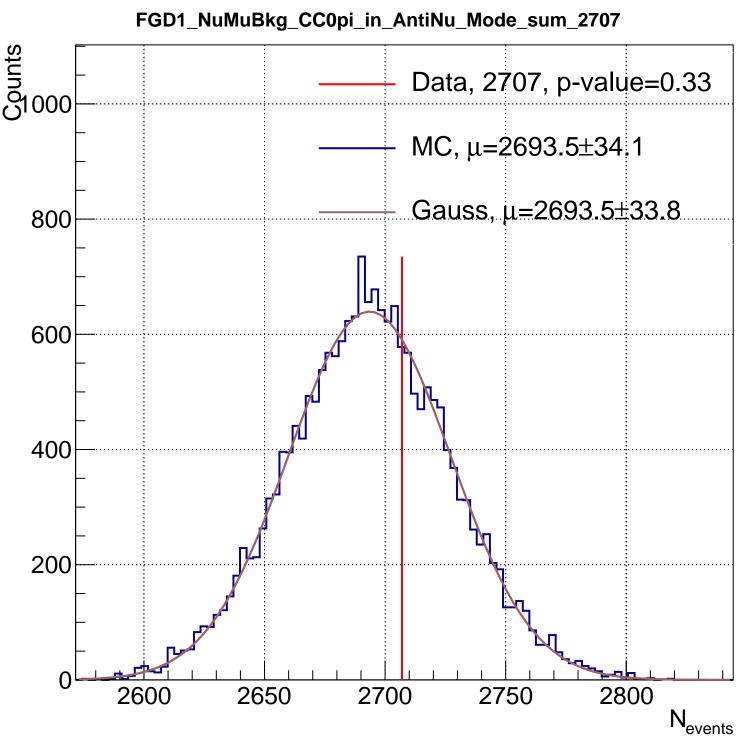


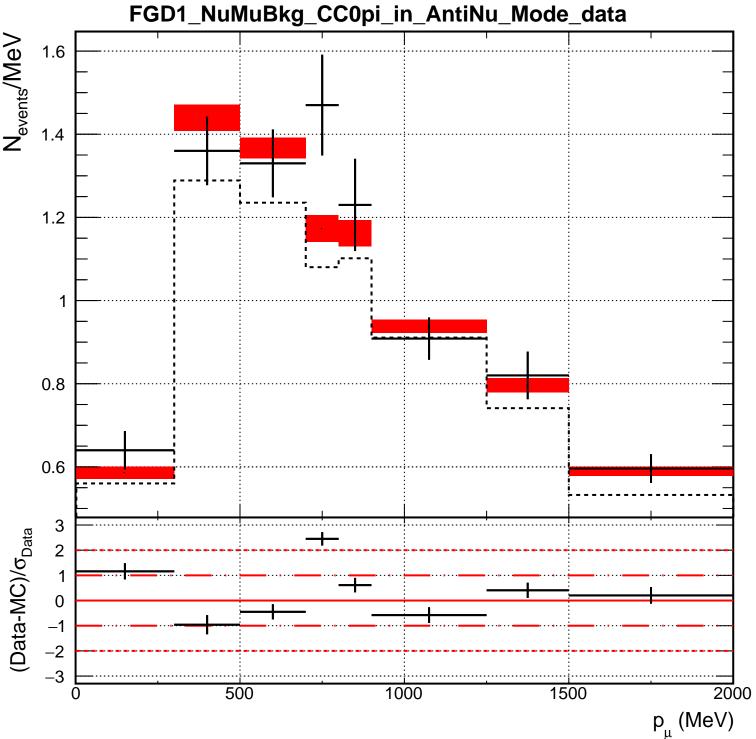
FGD1\_NuMuBkg\_CC0pi\_in\_AntiNu\_Mode\_MeanInL

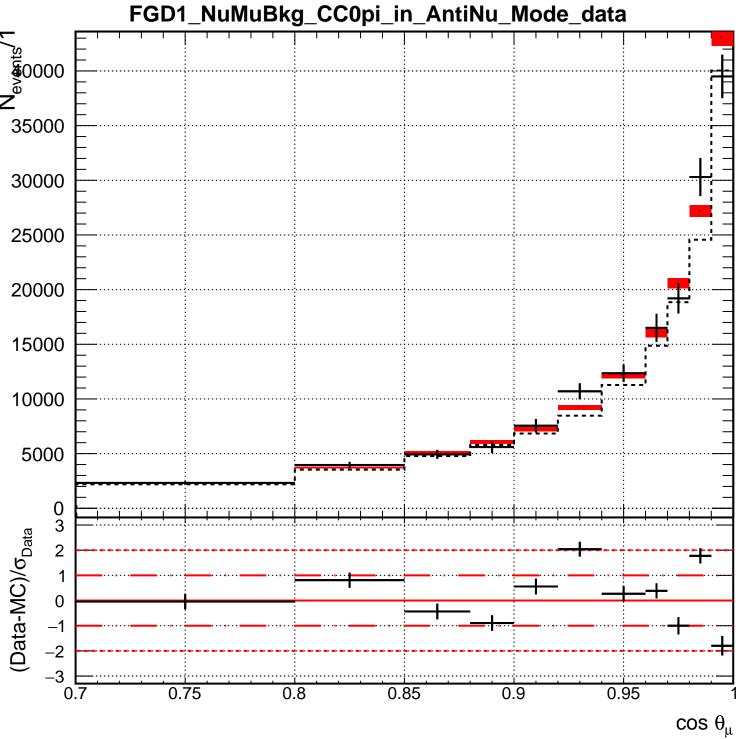


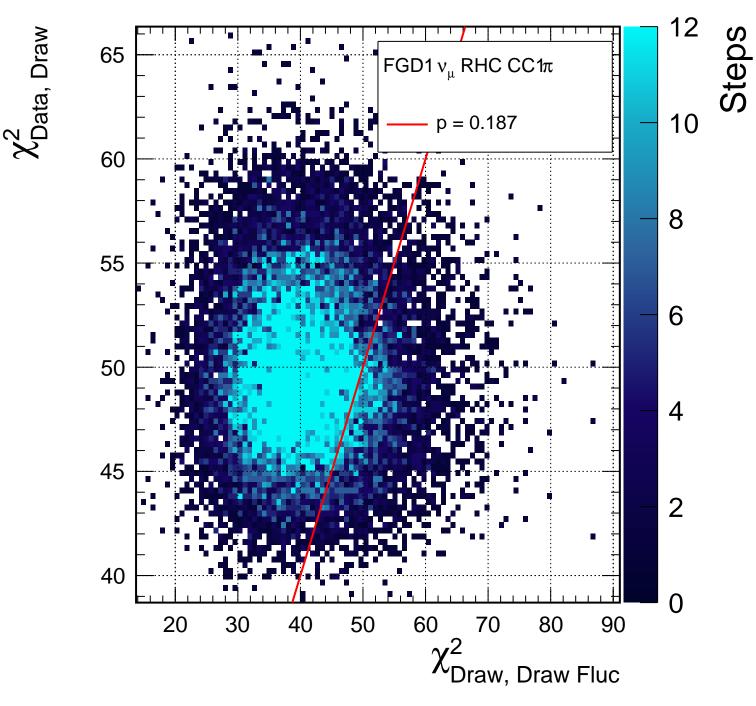
FGD1\_NuMuBkg\_CC0pi\_in\_AntiNu\_Mode\_ModeInL

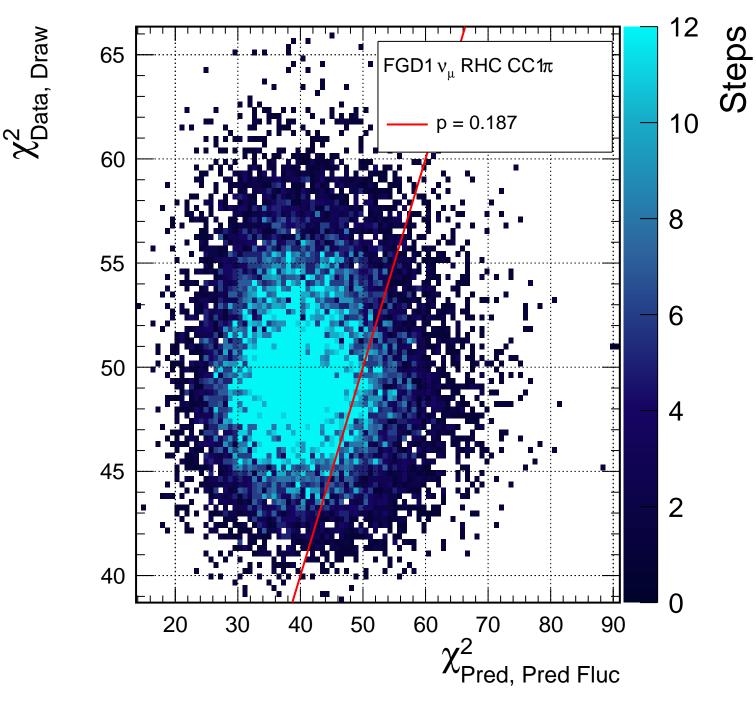




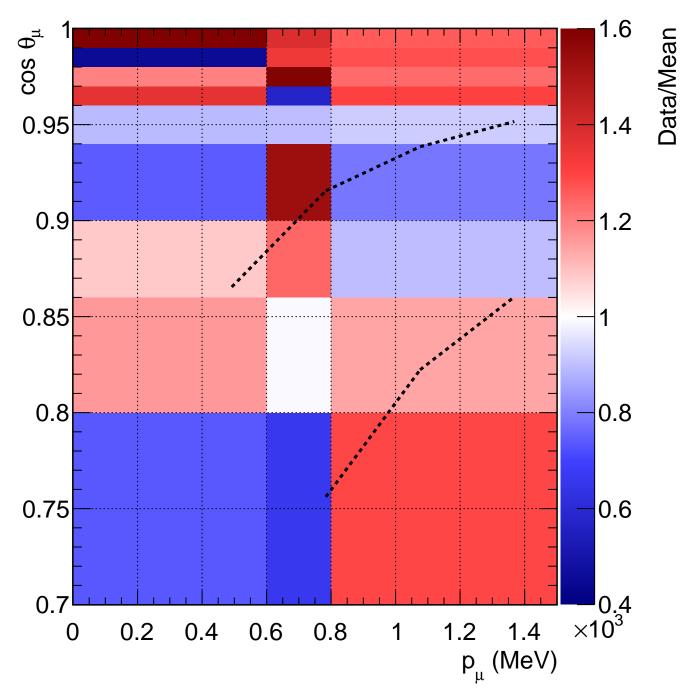




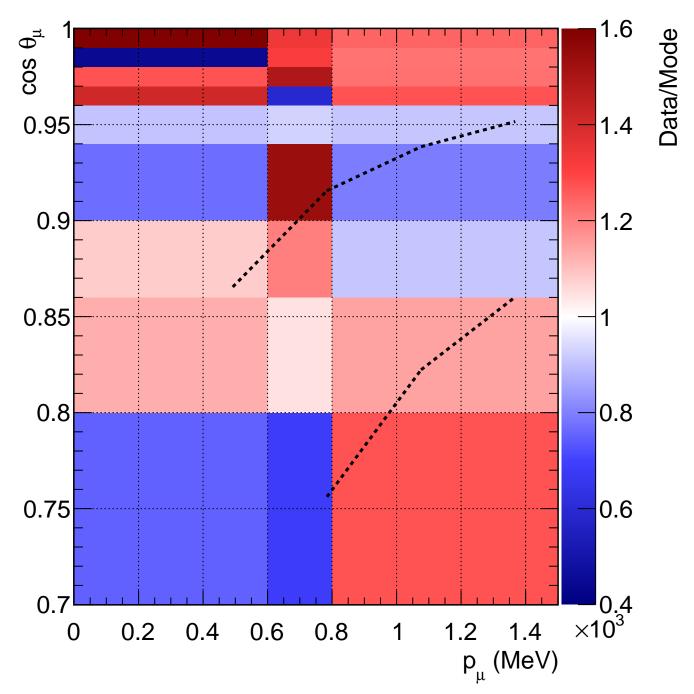




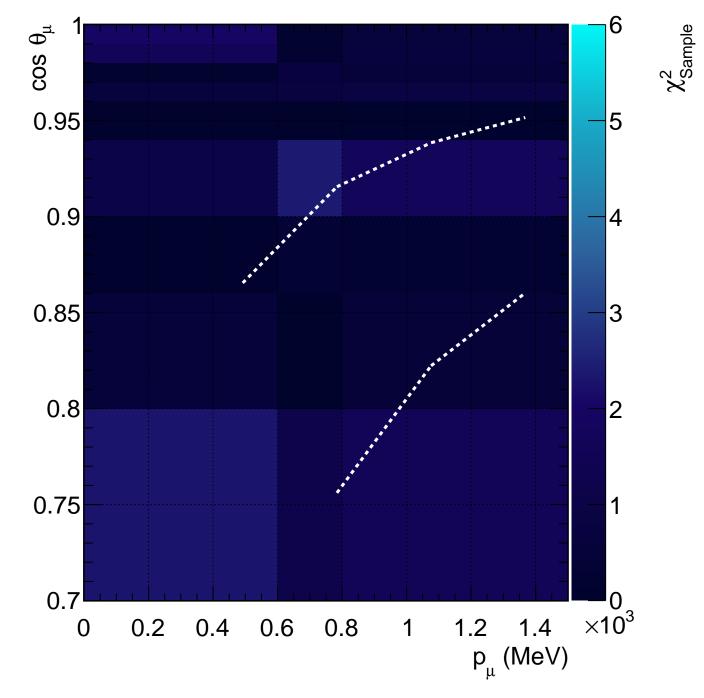
 $FGD1\_NuMuBkg\_CC1pi\_in\_AntiNu\_Mode\_mean\_ratio$ 



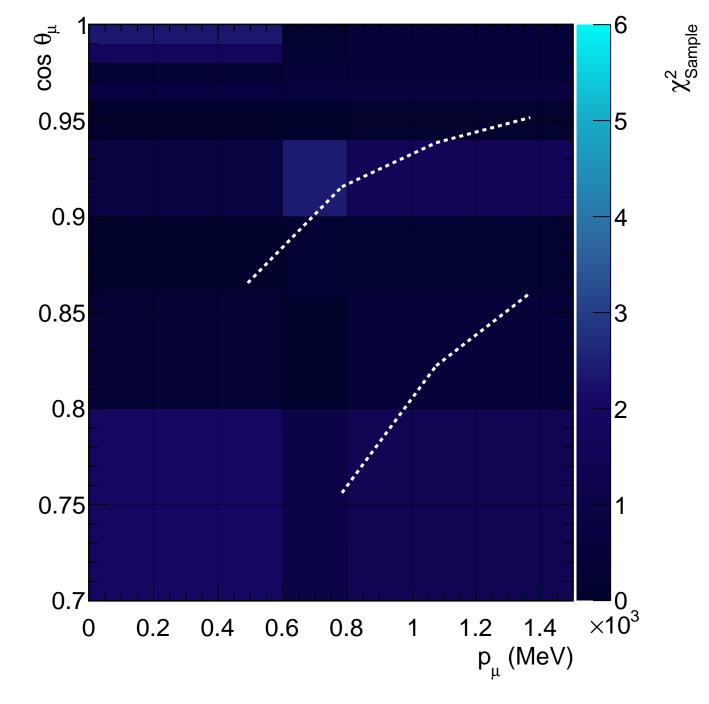
FGD1\_NuMuBkg\_CC1pi\_in\_AntiNu\_Mode\_mode\_ratio



FGD1\_NuMuBkg\_CC1pi\_in\_AntiNu\_Mode\_MeanInL

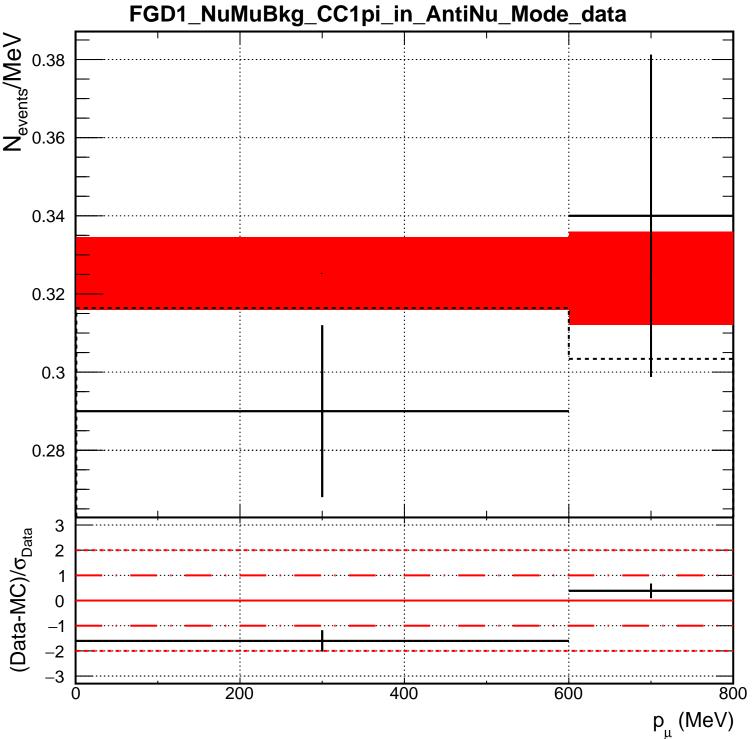


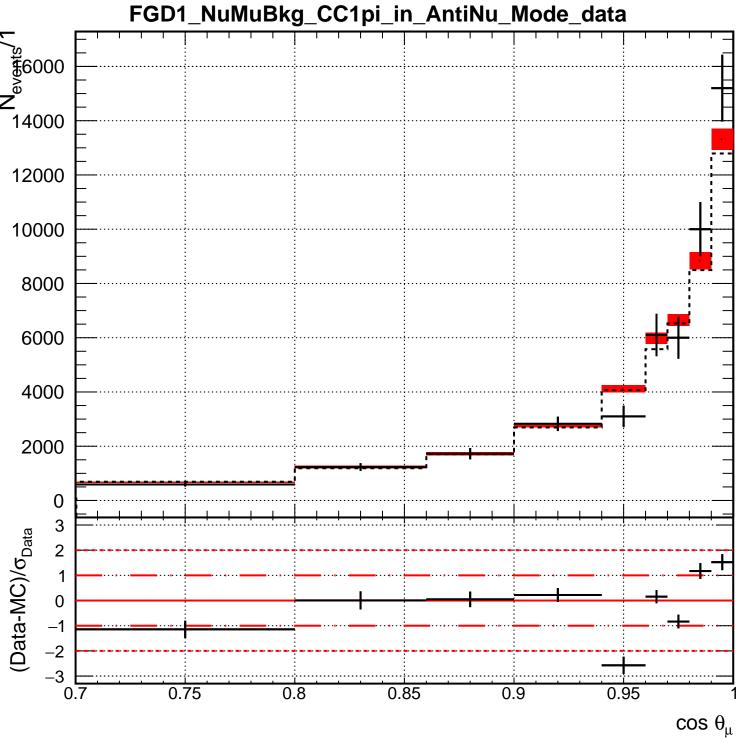
FGD1\_NuMuBkg\_CC1pi\_in\_AntiNu\_Mode\_ModeInL

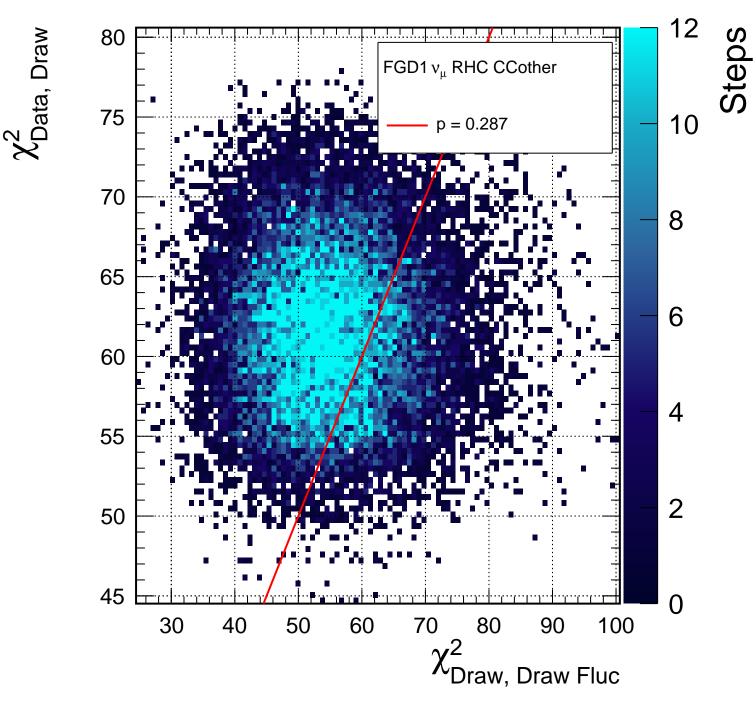


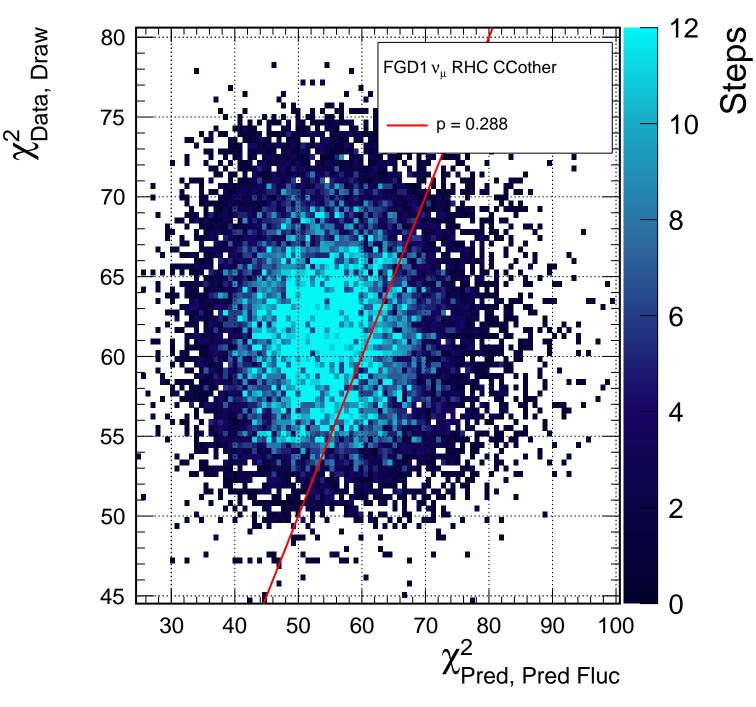
FGD1\_NuMuBkg\_CC1pi\_in\_AntiNu\_Mode\_sum\_847 Counts Counts Data, 847, p-value=0.97 MC,  $\mu$ =870.5±13.3 Gauss,  $\mu$ =870.4±13.2 

<sup>l</sup>events

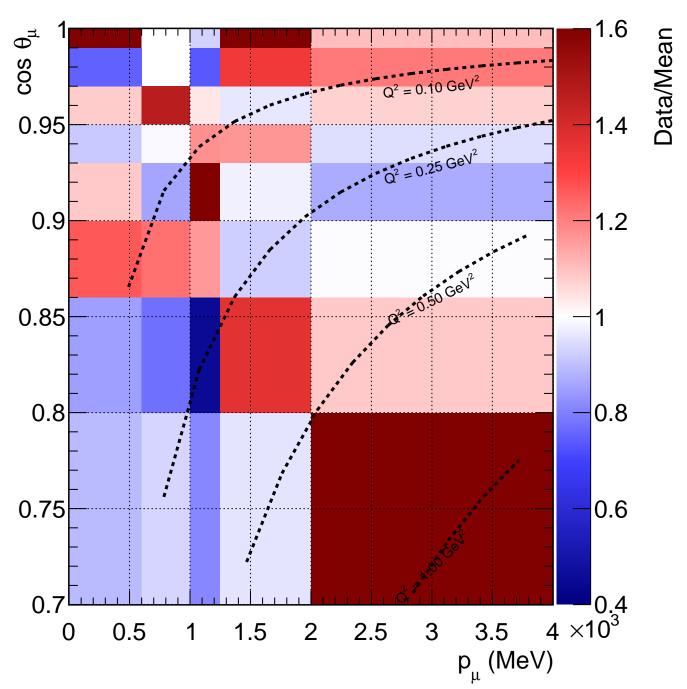




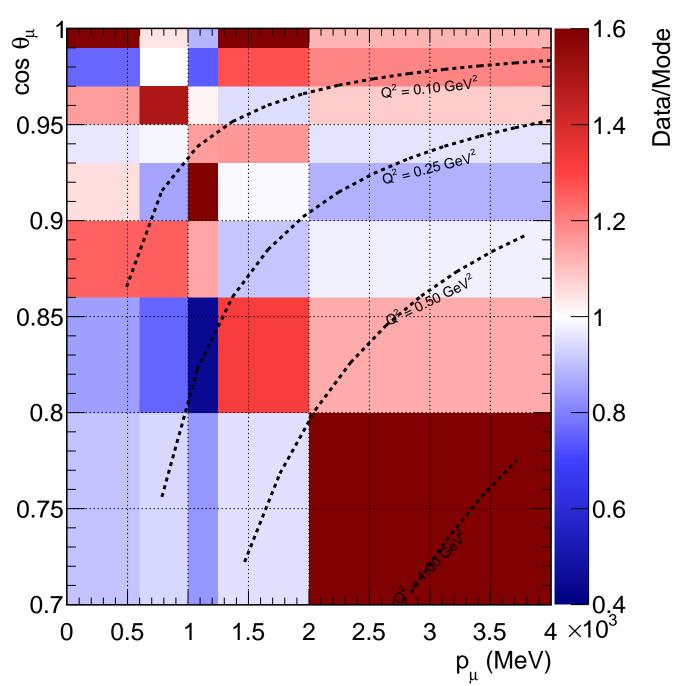




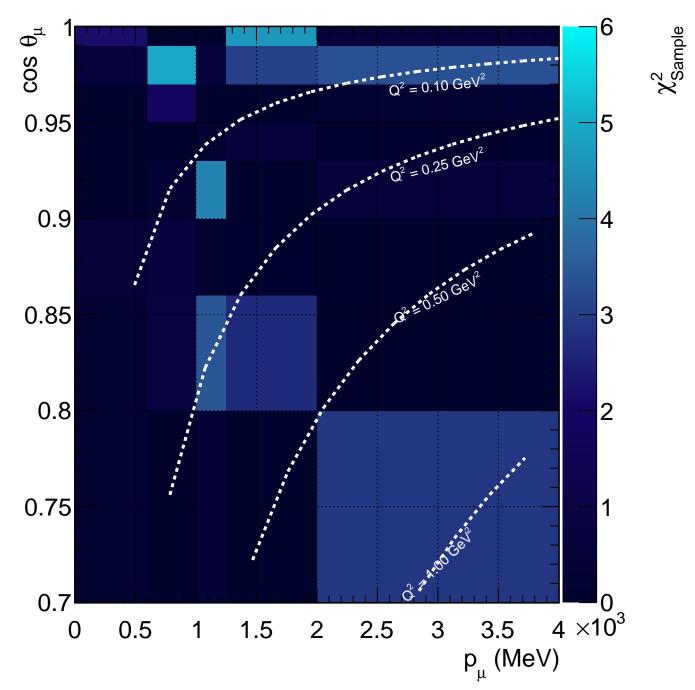
 $FGD1\_NuMuBkg\_CCother\_in\_AntiNu\_Mode\_mean\_ratio$ 



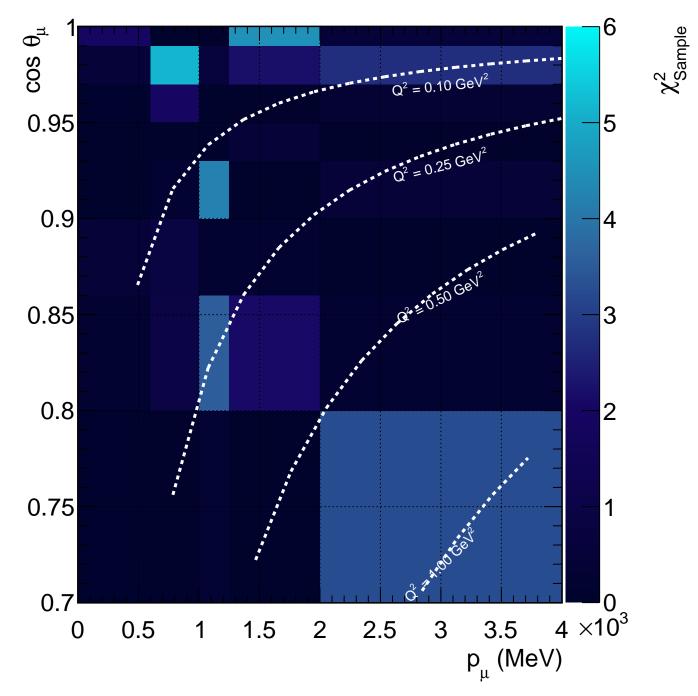
FGD1\_NuMuBkg\_CCother\_in\_AntiNu\_Mode\_mode\_ratio

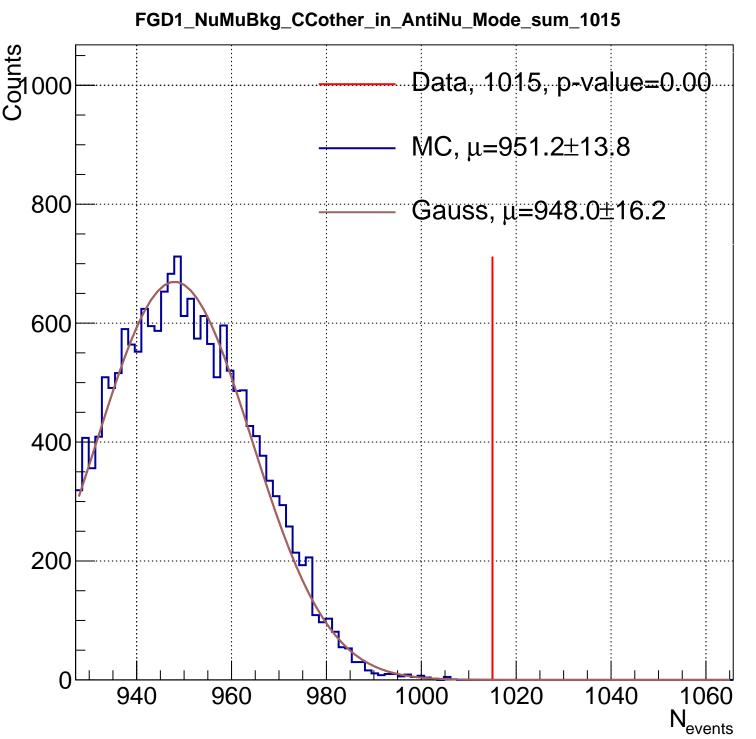


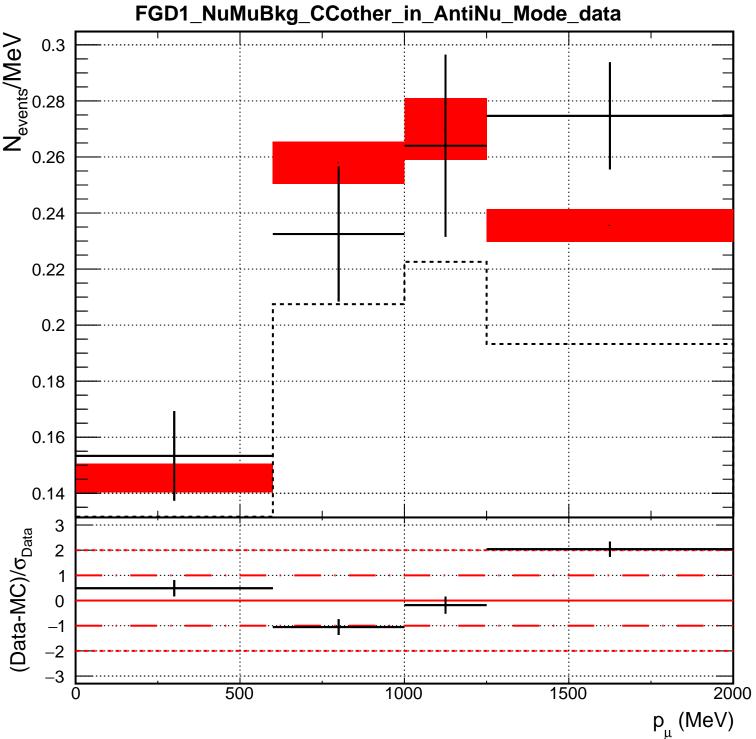
 ${\bf FGD1\_NuMuBkg\_CCother\_in\_AntiNu\_Mode\_MeanInL}$ 

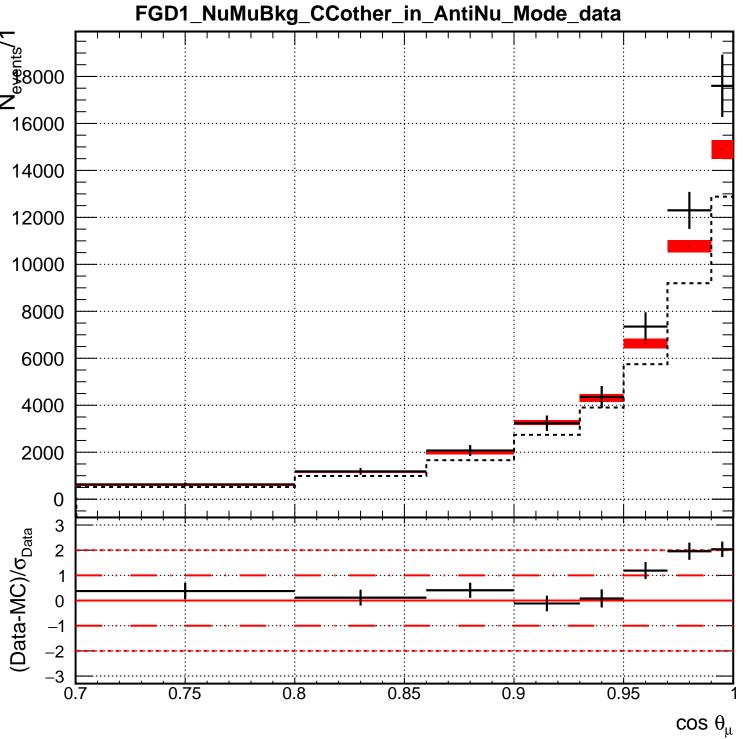


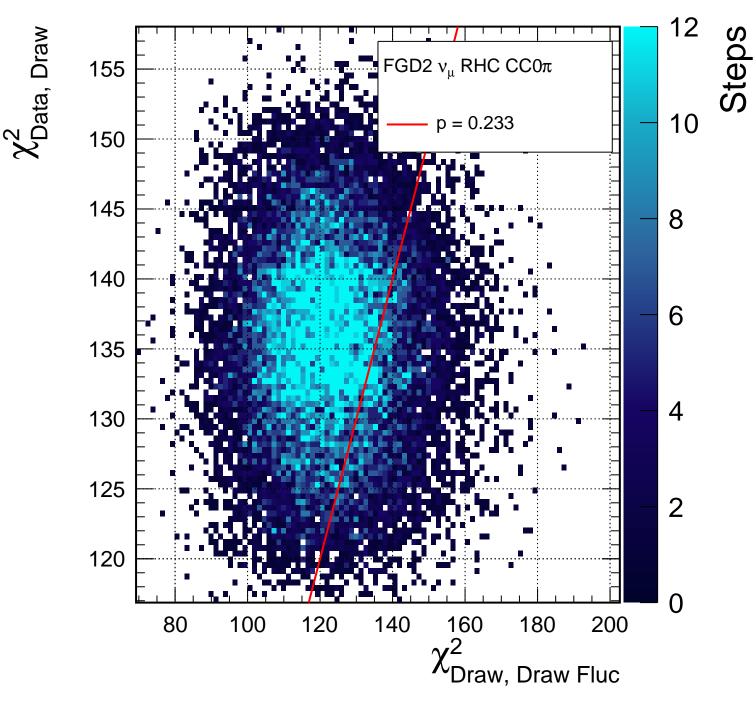
 $FGD1\_NuMuBkg\_CCother\_in\_AntiNu\_Mode\_ModelnL$ 

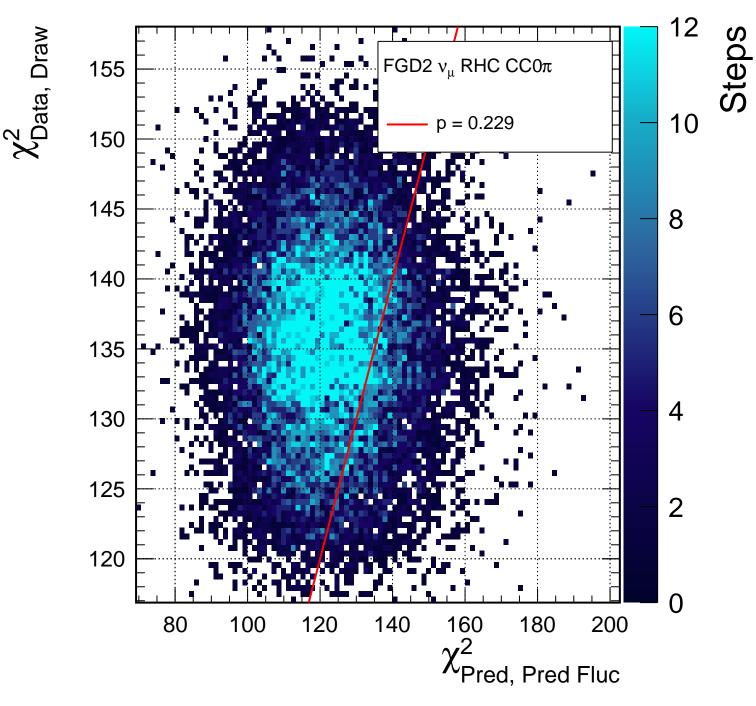




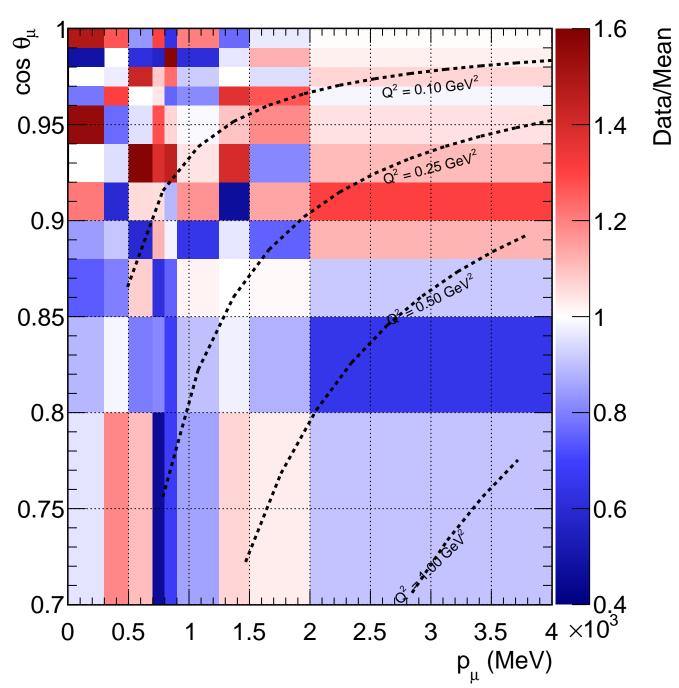




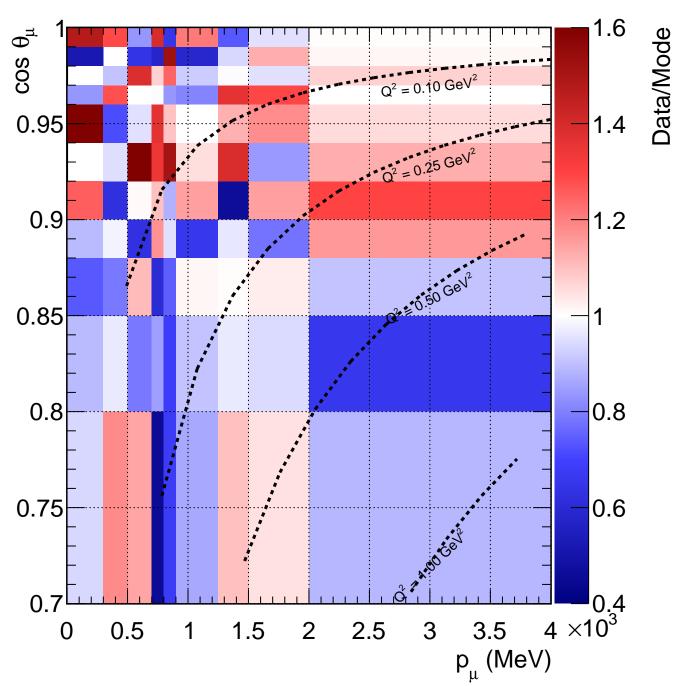




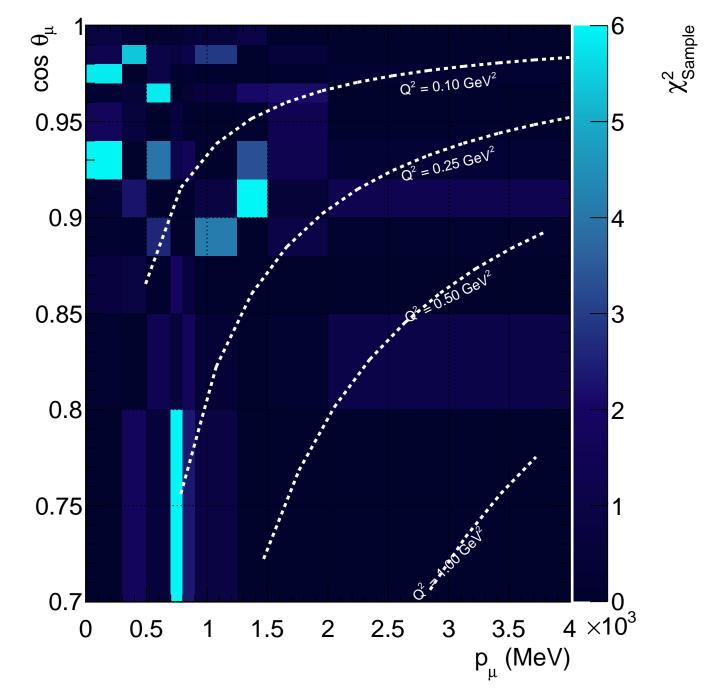
 $FGD2\_NuMuBkg\_CC0pi\_in\_AntiNu\_Mode\_mean\_ratio$ 



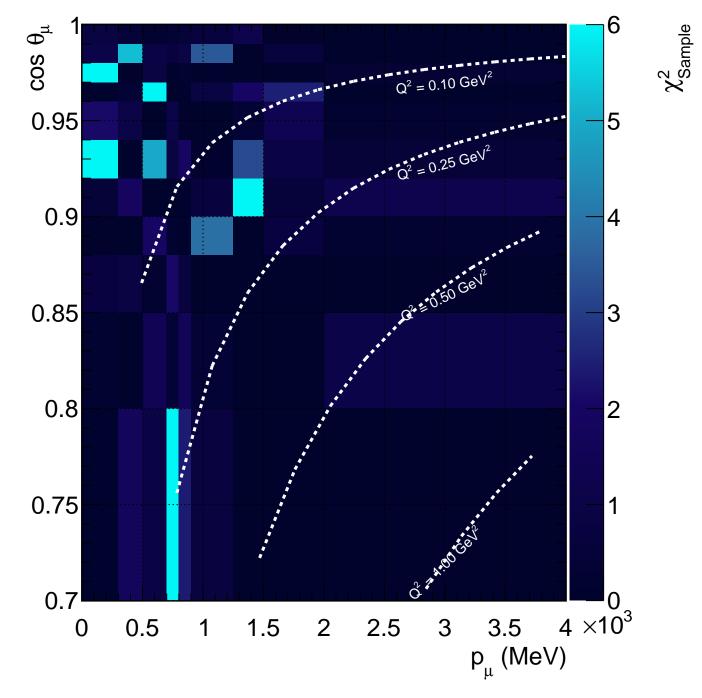
 $FGD2\_NuMuBkg\_CC0pi\_in\_AntiNu\_Mode\_mode\_ratio$ 

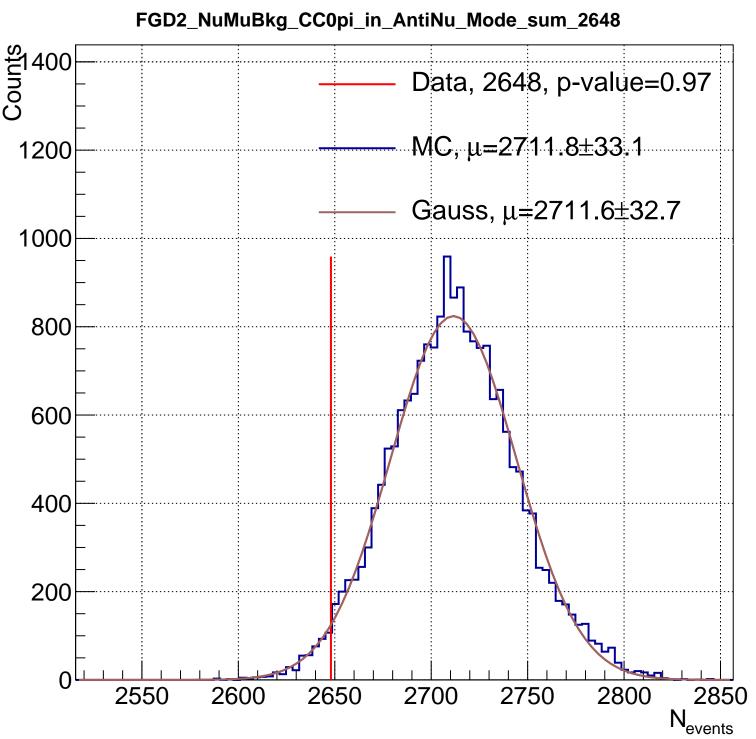


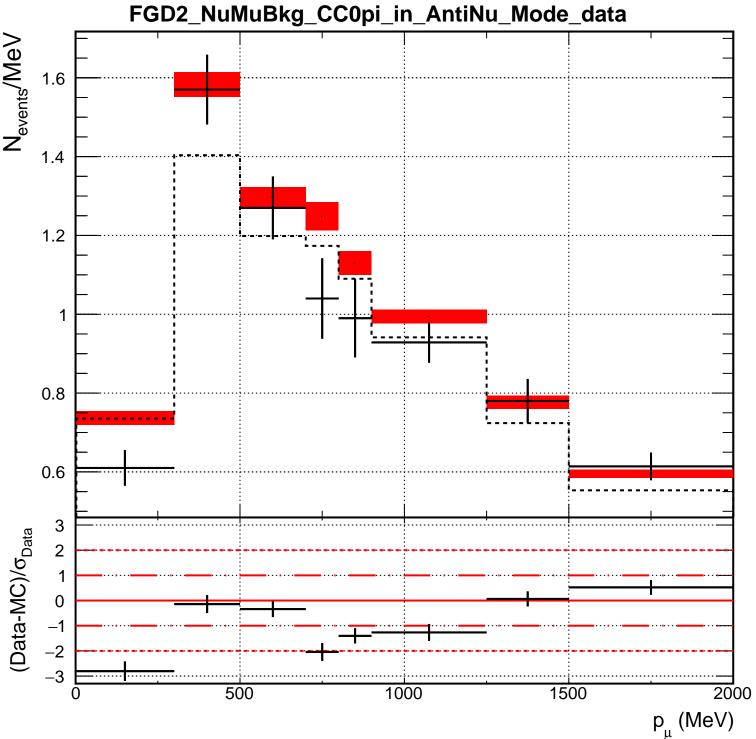
FGD2\_NuMuBkg\_CC0pi\_in\_AntiNu\_Mode\_MeanInL

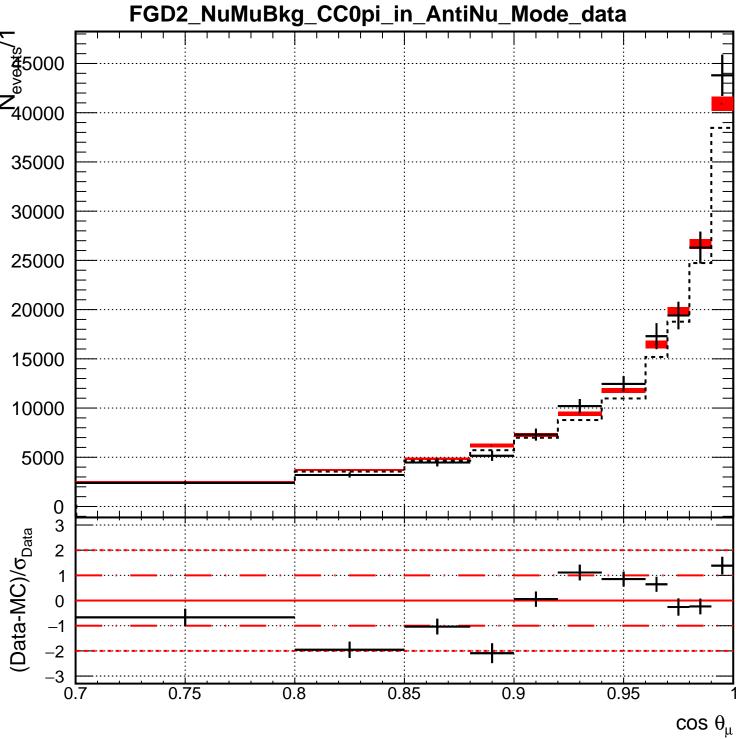


FGD2\_NuMuBkg\_CC0pi\_in\_AntiNu\_Mode\_ModeInL

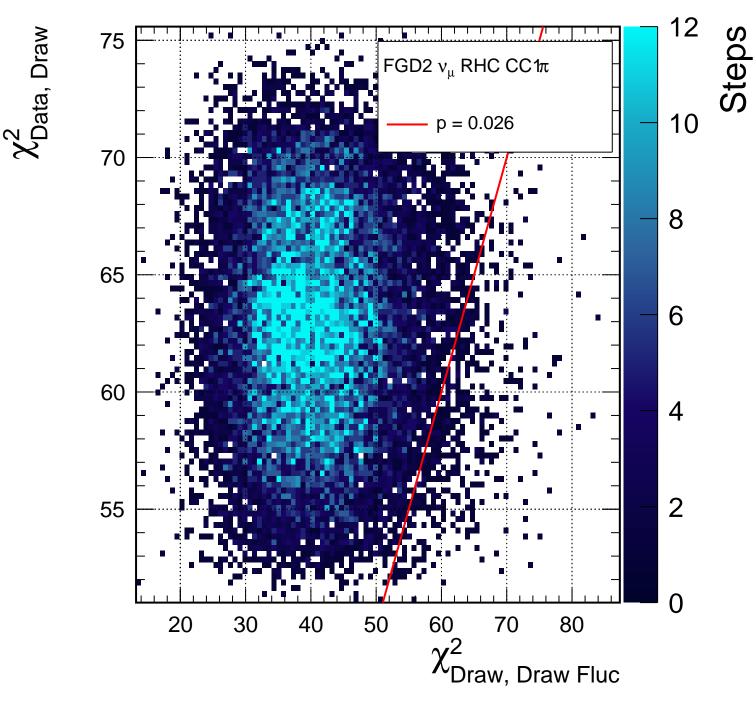




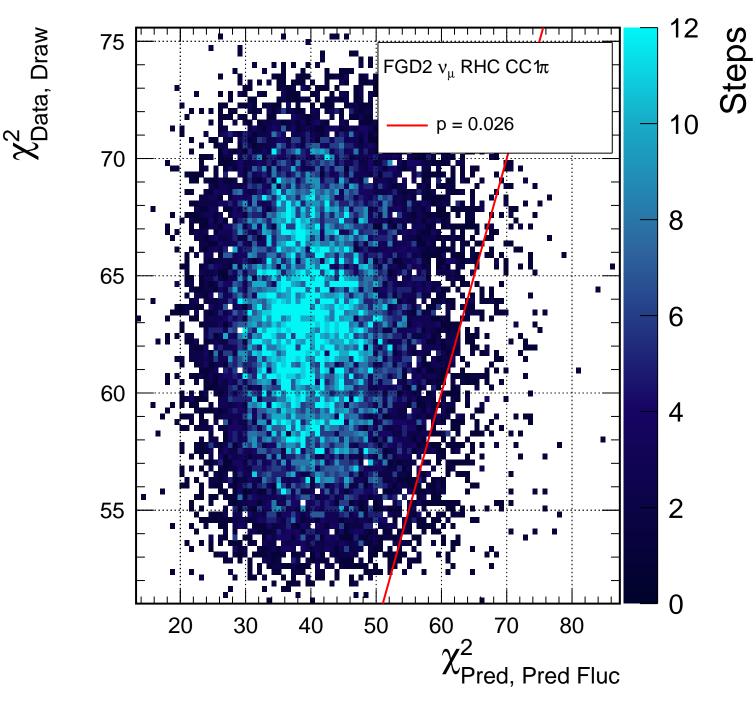




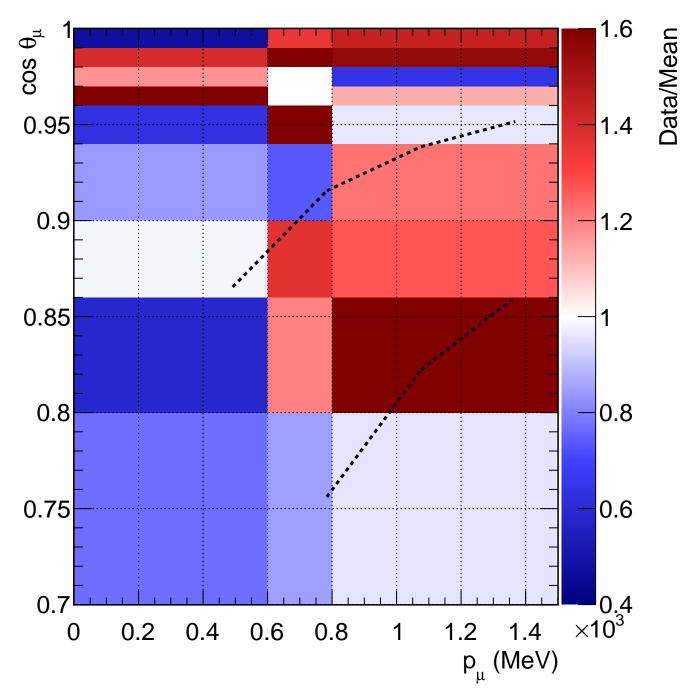
## **DataDrawFluc**



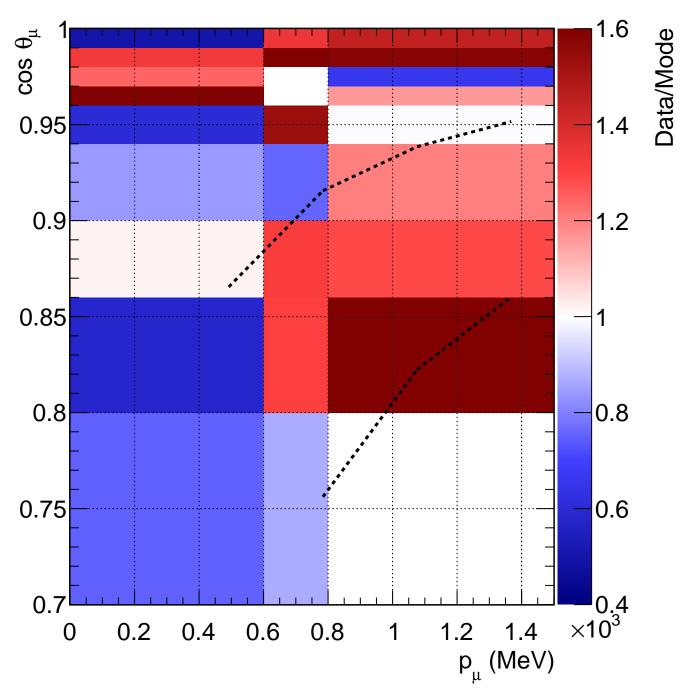
## **DataPredFluc**



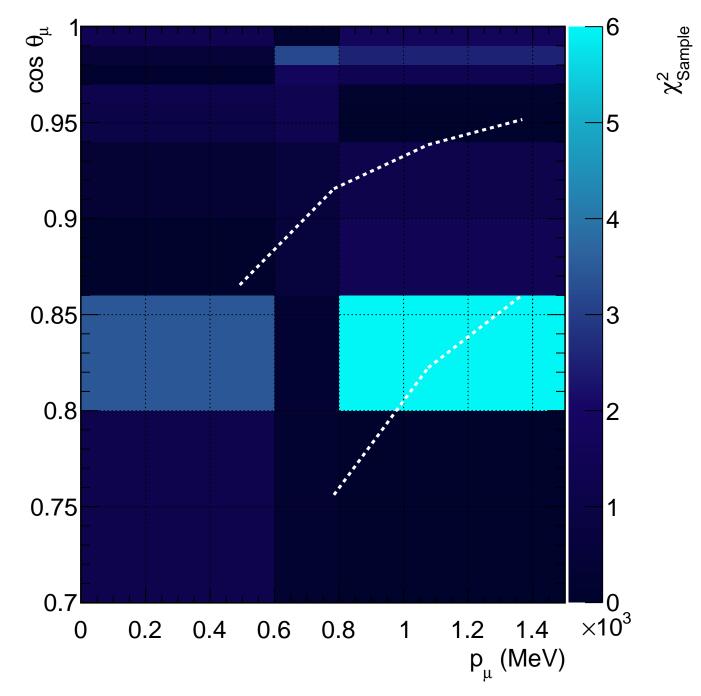
 $FGD2\_NuMuBkg\_CC1pi\_in\_AntiNu\_Mode\_mean\_ratio$ 



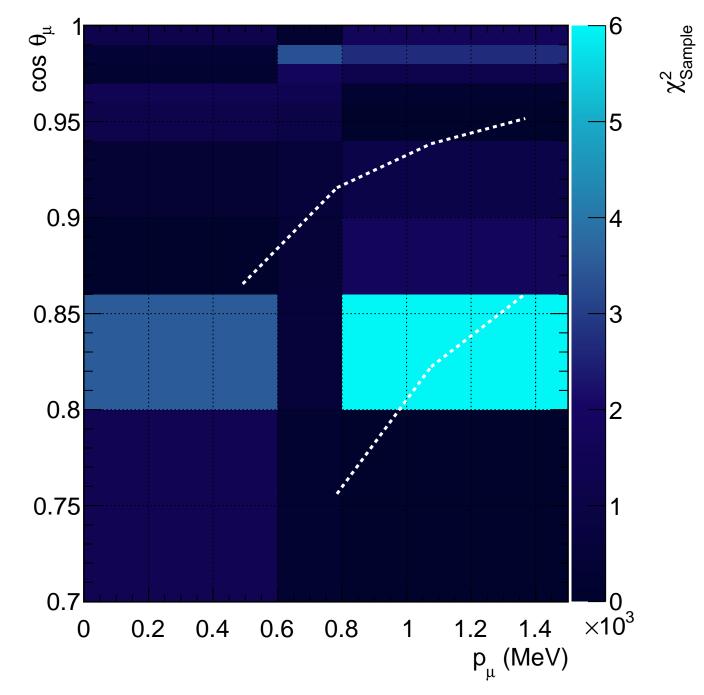
FGD2\_NuMuBkg\_CC1pi\_in\_AntiNu\_Mode\_mode\_ratio



FGD2\_NuMuBkg\_CC1pi\_in\_AntiNu\_Mode\_MeanInL

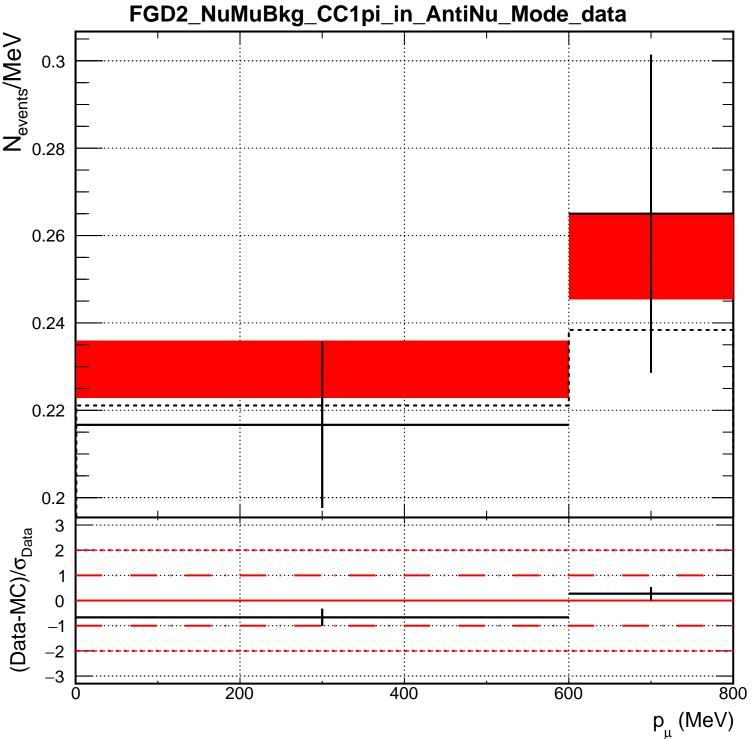


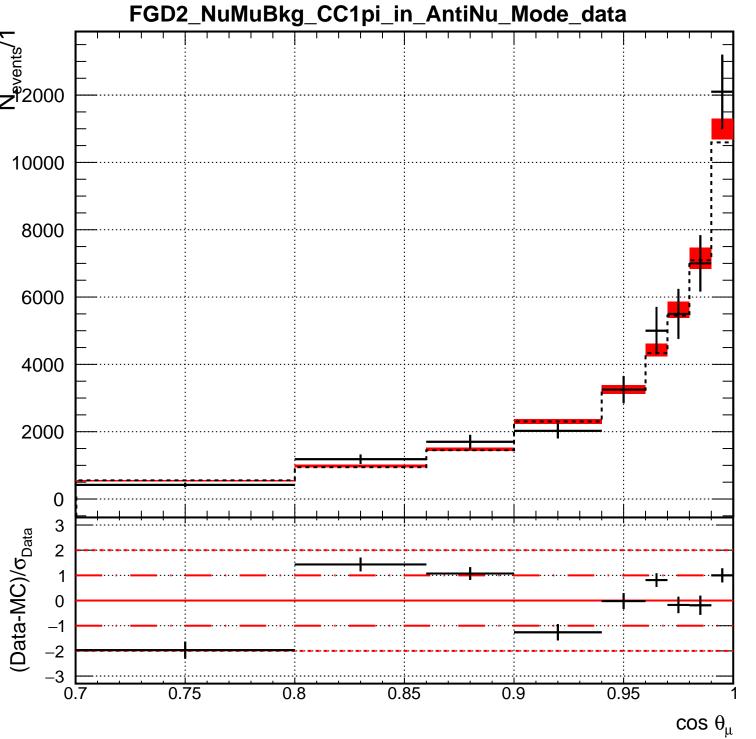
FGD2\_NuMuBkg\_CC1pi\_in\_AntiNu\_Mode\_ModeInL



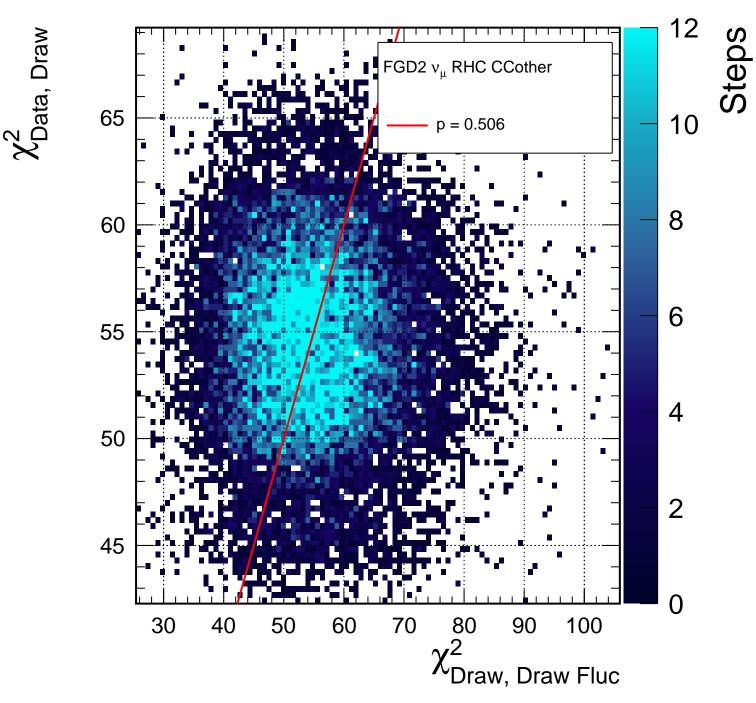
FGD2\_NuMuBkg\_CC1pi\_in\_AntiNu\_Mode\_sum\_693 Data, 693, p-value=0.30 MC,  $\mu$ =687.6±10.8 Gauss,  $\mu$ =687.5±10.9 

<sup>l</sup>events

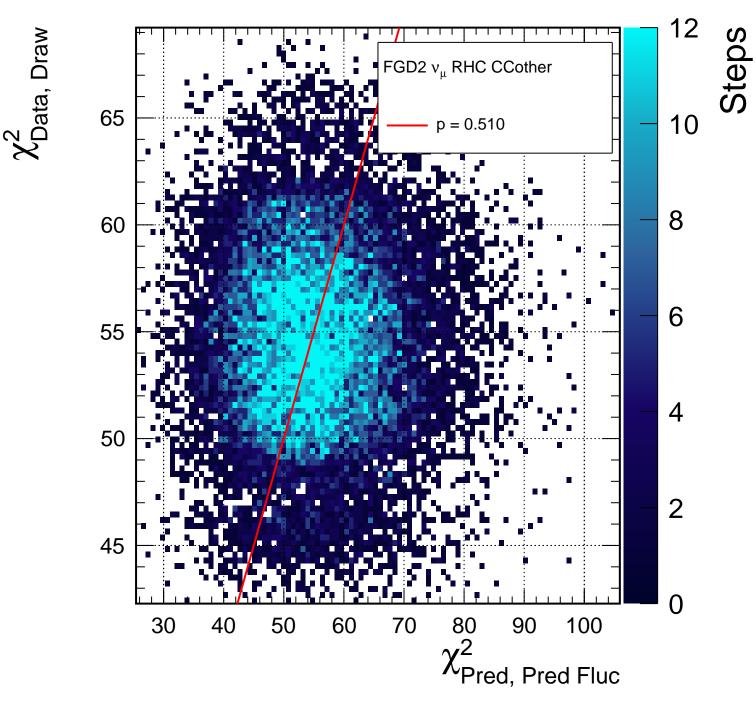




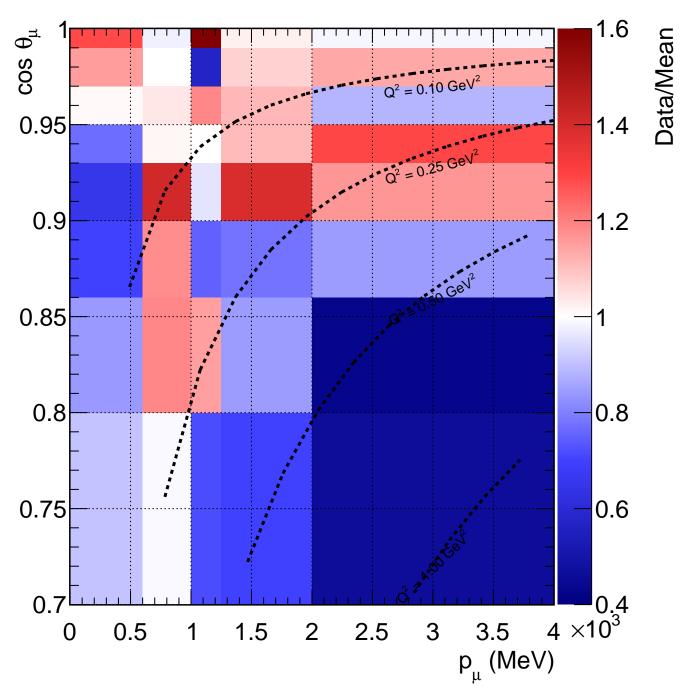
## **DataDrawFluc**



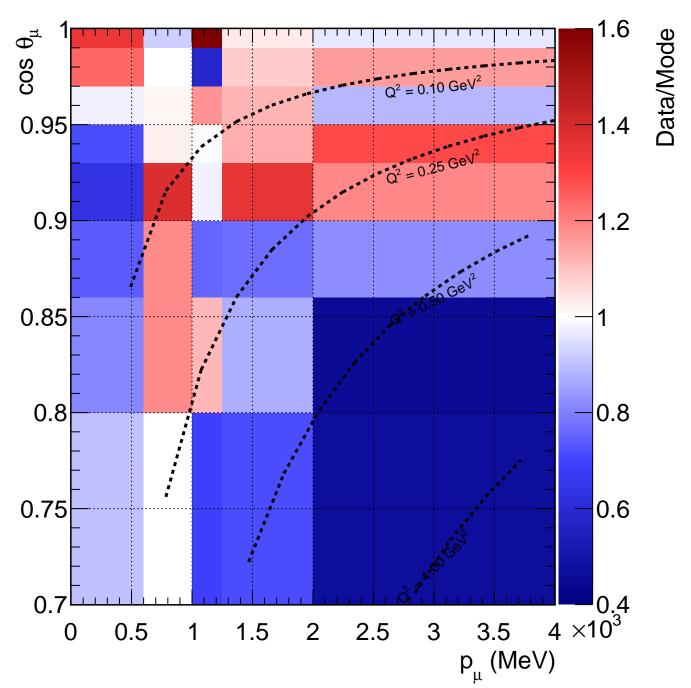
## **DataPredFluc**



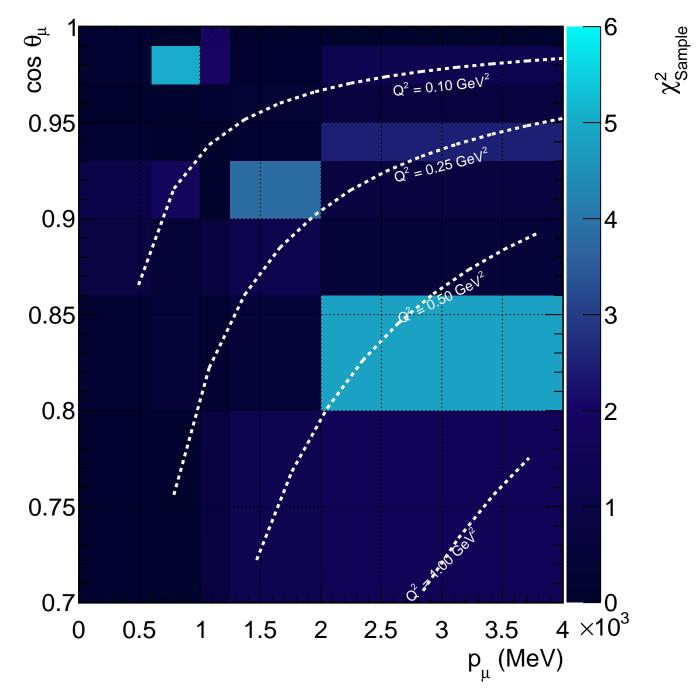
 $FGD2\_NuMuBkg\_CCother\_in\_AntiNu\_Mode\_mean\_ratio$ 



 $FGD2\_NuMuBkg\_CCother\_in\_AntiNu\_Mode\_mode\_ratio$ 



 ${\bf FGD2\_NuMuBkg\_CCother\_in\_AntiNu\_Mode\_MeanInL}$ 



 $FGD2\_NuMuBkg\_CCother\_in\_AntiNu\_Mode\_ModelnL$ 

