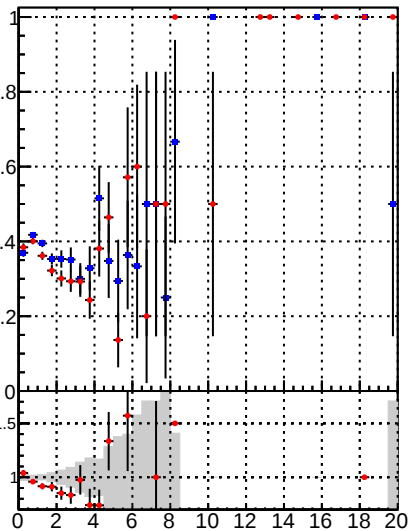


### Fake rate vs normalized $\chi^2$



### Duplicates Rate vs normalized $\chi^2$



### Pileup rate vs normalized $\chi^2$



Fake rate vs. 

