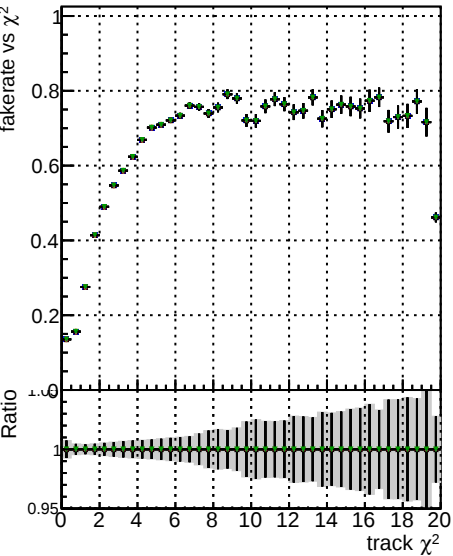
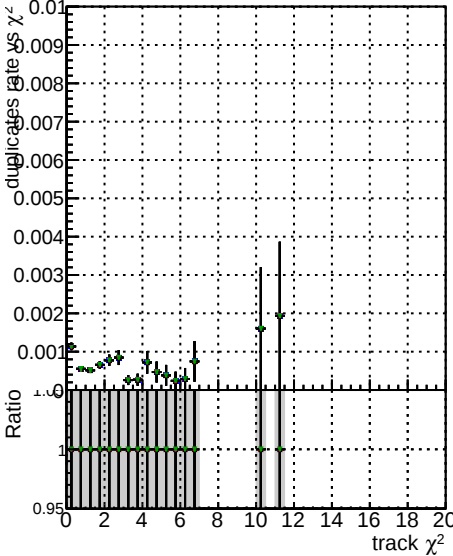


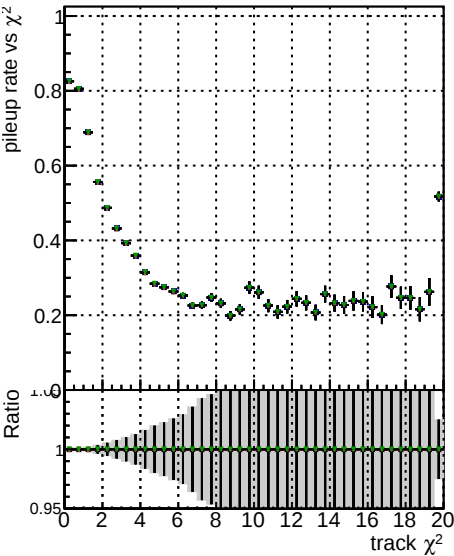
Fake rate vs normalized  $\chi^2$



Duplicates Rate vs normalized  $\chi^2$



Pileup rate vs normalized  $\chi^2$



Fake rate vs.  original options

