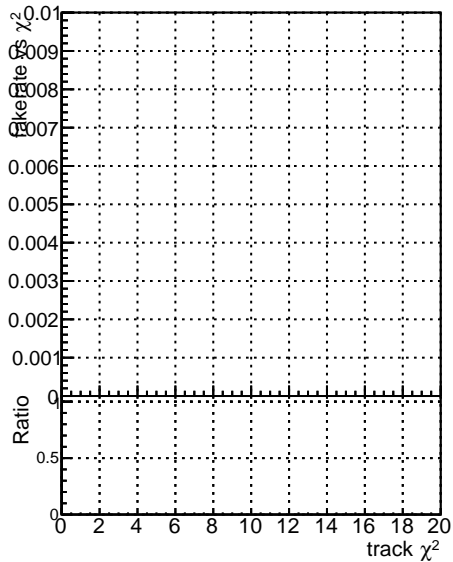
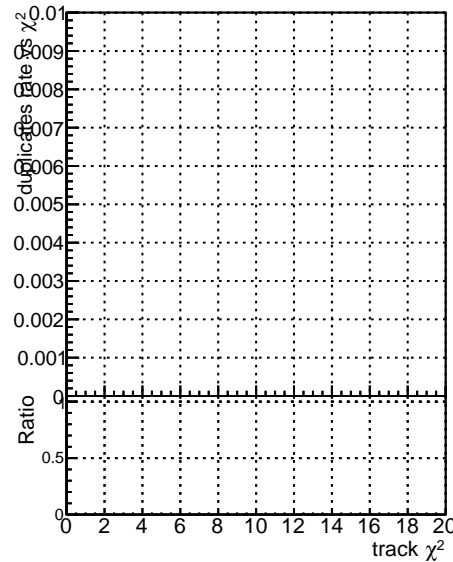


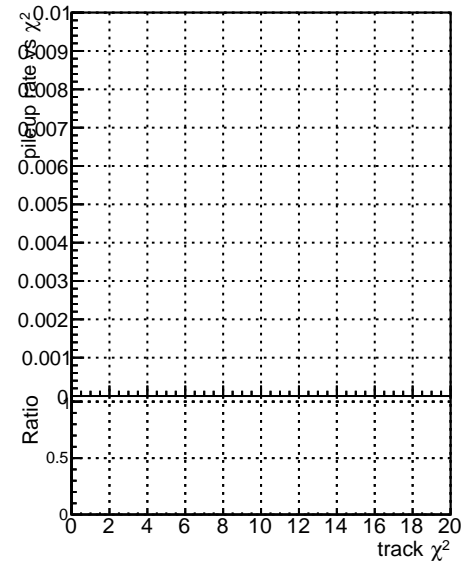
Fake rate vs normalized  $\chi^2$



Duplicates Rate vs normalized  $\chi^2$



Pileup rate vs normalized  $\chi^2$



— BGMstep3 SoftQCD-CKF  
— BGMstep3 SoftQCD-default  
— BGMstep3 SoftQCD-defaultNEW3