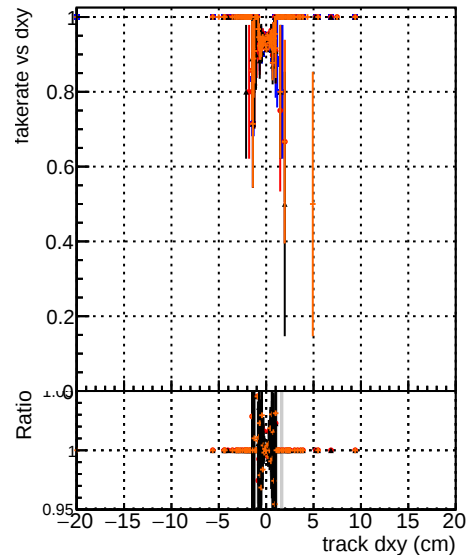
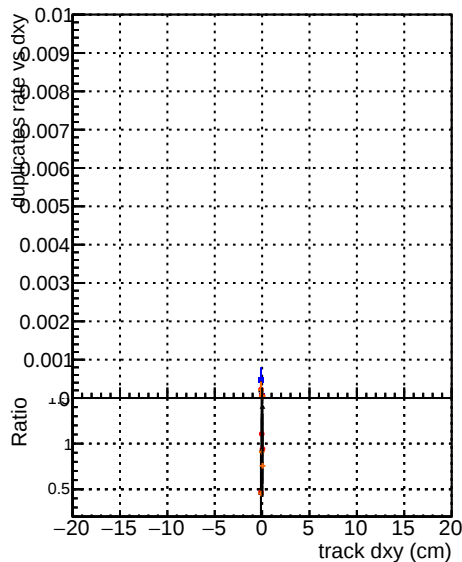


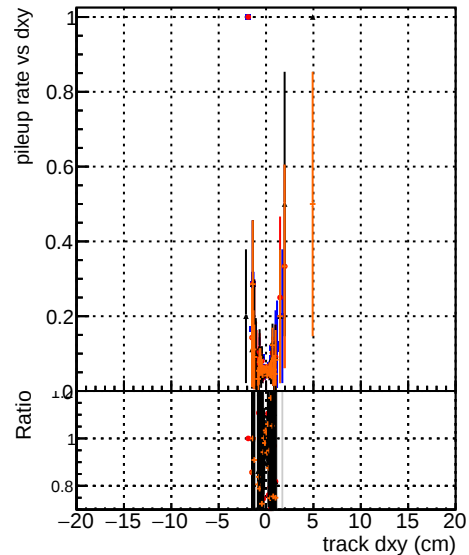
**Fake rate vs dxy**



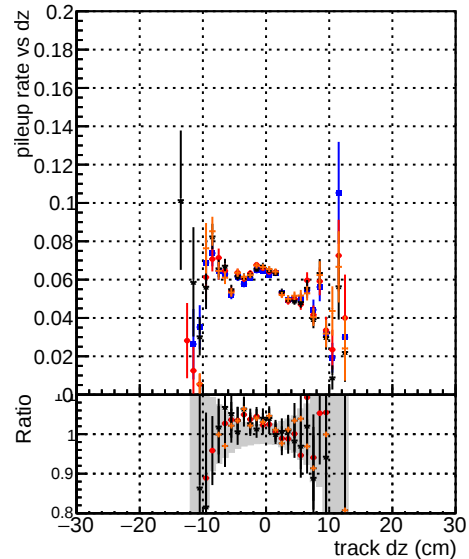
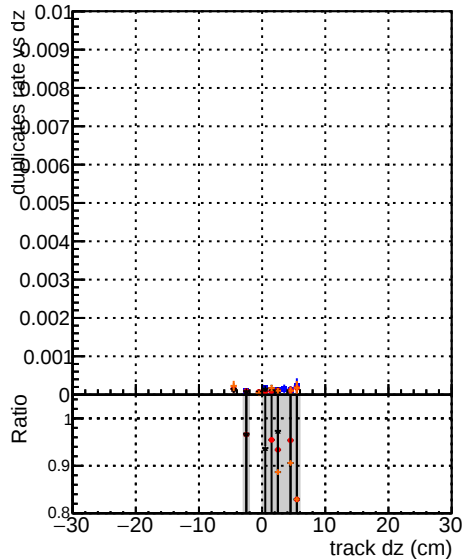
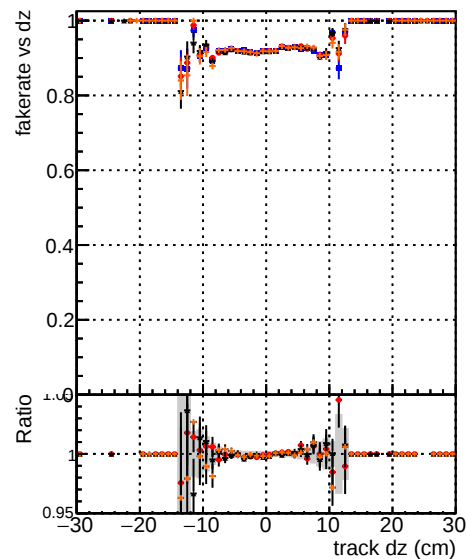
**Duplicates Rate vs Dxy**



**Pileup rate vs dxy**



**Fake rate vs dz**



— BGM original step2 tbar-phase1-newgeom  
— BGM pixelCPE template step2 tbar-phase1-newgeom  
— BGM pixelCPE template cutchisquare5 step2 tbar-phase1-newgeom test