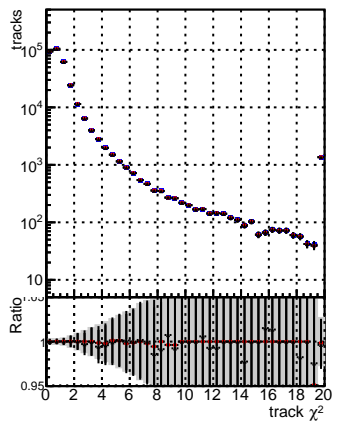
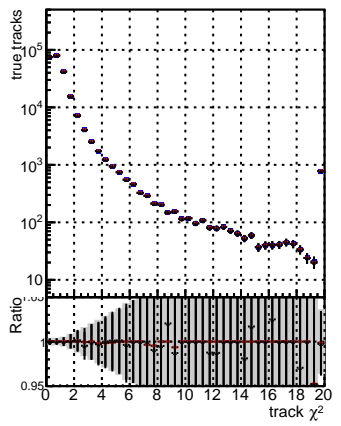
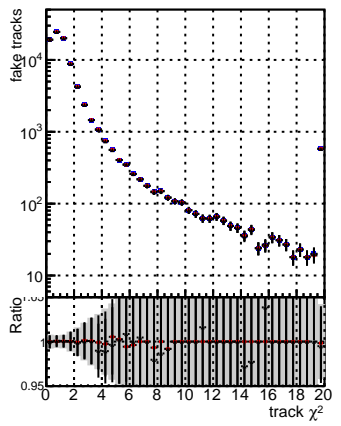
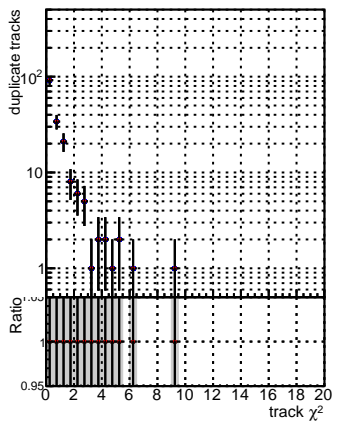
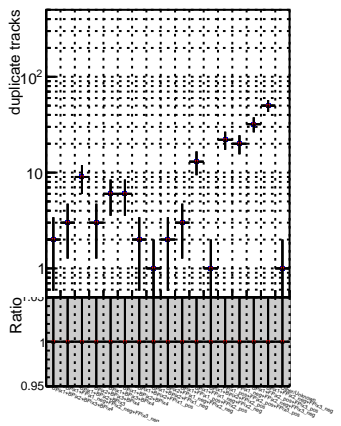
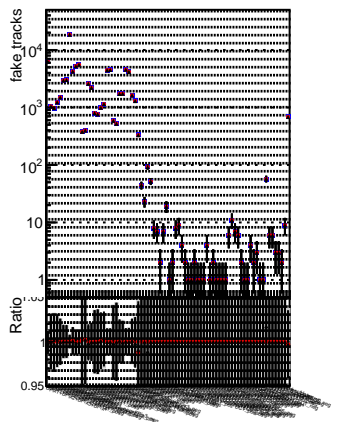
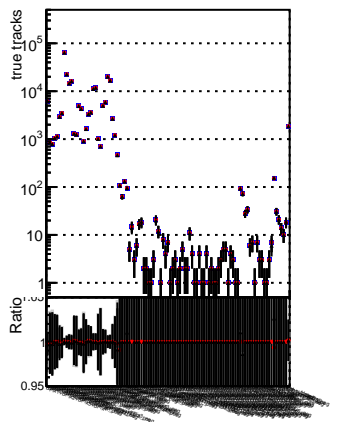
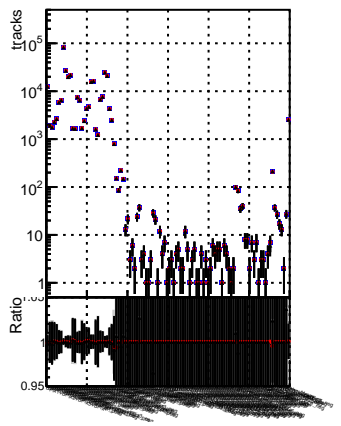


**N of reco track vs normalized  $\chi^2$** **N of associated (recoToSim) tracks vs normalized  $\chi^2$** **N of associated (recoToSim) looper tracks vs normalized  $\chi^2$** **N of associated (recoToSim) looper tracks vs normalized  $\chi^2$** **N of reco track vs.  $\chi^2$** 

Legend for **N of reco track vs.  $\chi^2$** :

- Blue circle: DGM
- Purple circle: ttbar
- Red circle: PU
- Green circle: mkFit
- Black circle: Siter
- Orange circle: updatedPR111
- Pink circle: update
- Light blue circle: fixPropagation

Legend for **N of associated (recoToSim) looper tracks vs normalized  $\chi^2$** :

- Black circle: verSet