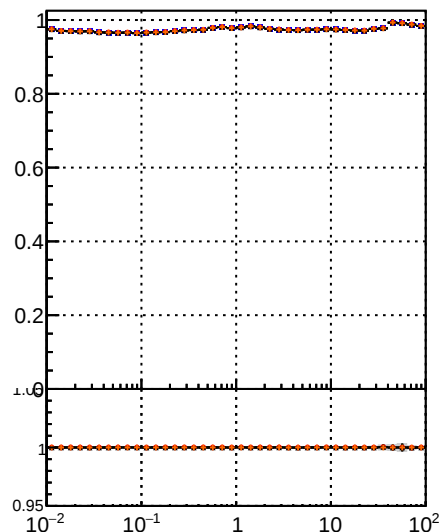
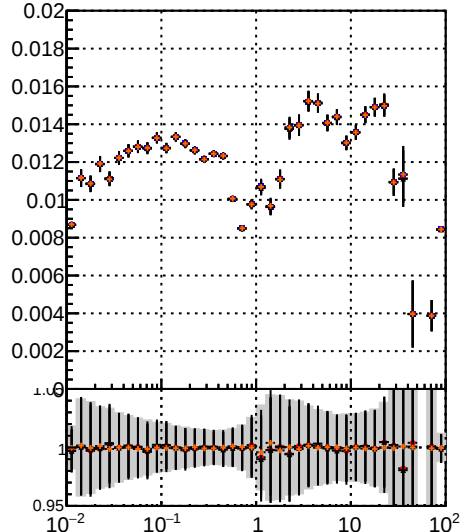


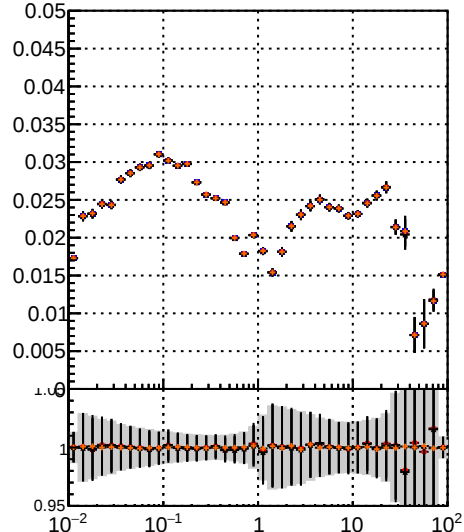
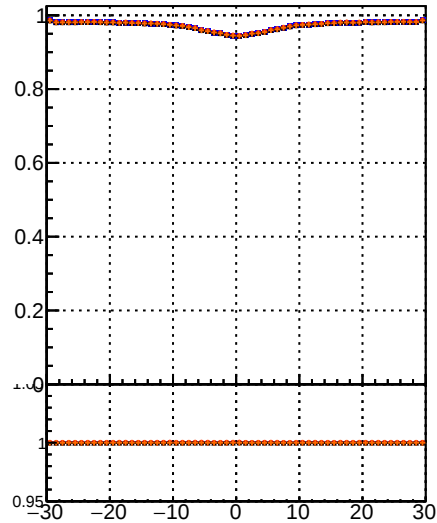
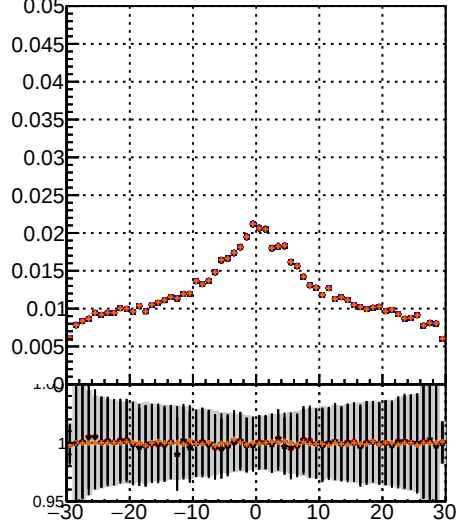
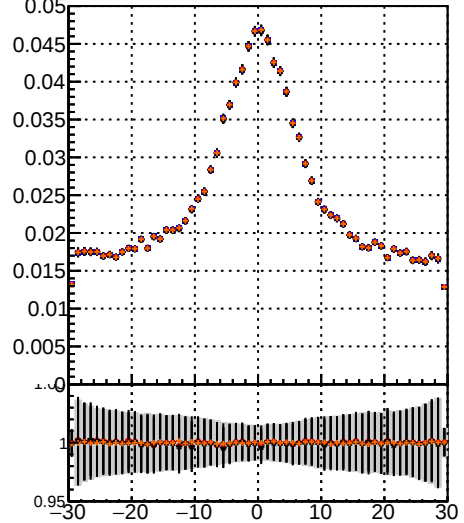
Fake rate vs vertpos



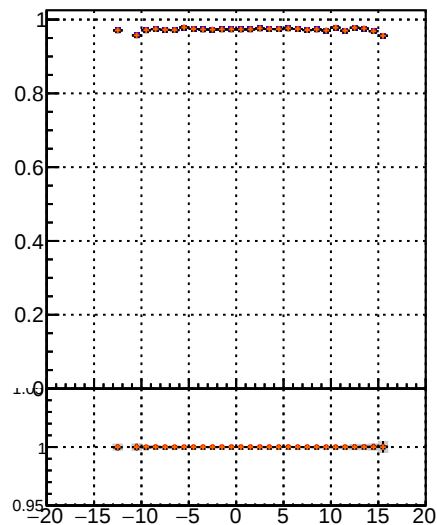
Duplicates Rate vs vertpos



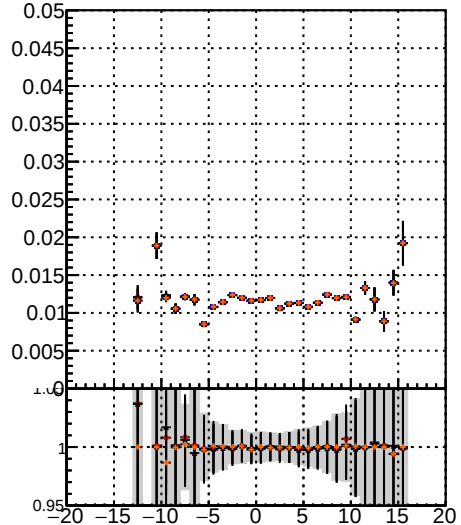
Pileup rate vs vertpos

Fake rate vs $\sqrt{s}$ Duplicates Rate vs $\sqrt{s}$ Pileup rate vs $\sqrt{s}$ 

Fake rate vs. sim PV z



Duplicates Rate vs sim PV z



Pileup rate vs. sim PV z

