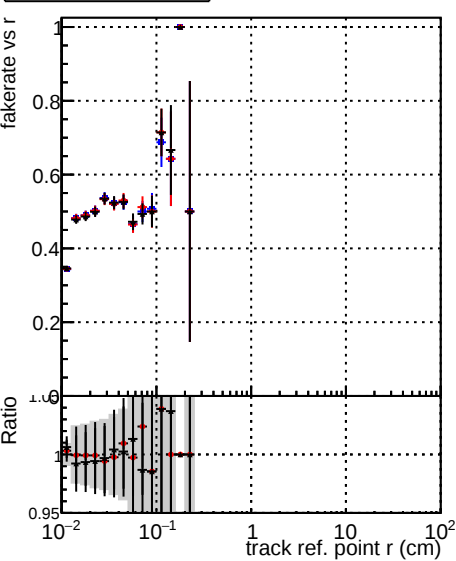


**Fake rate vs vertpos**



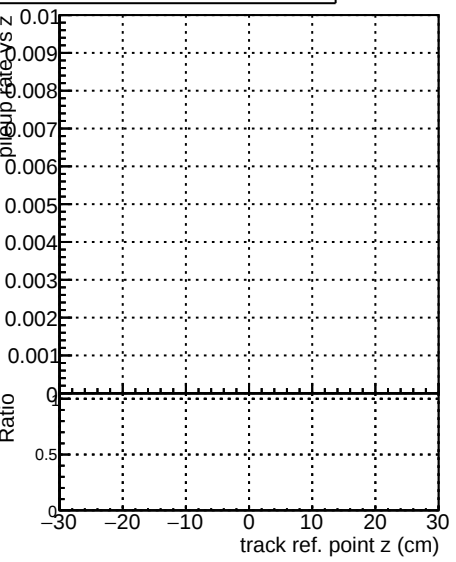
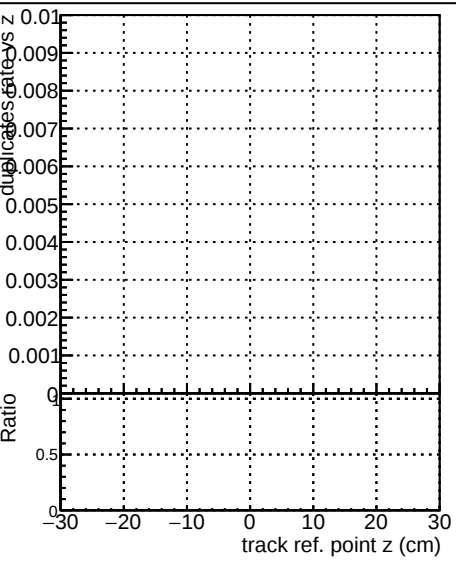
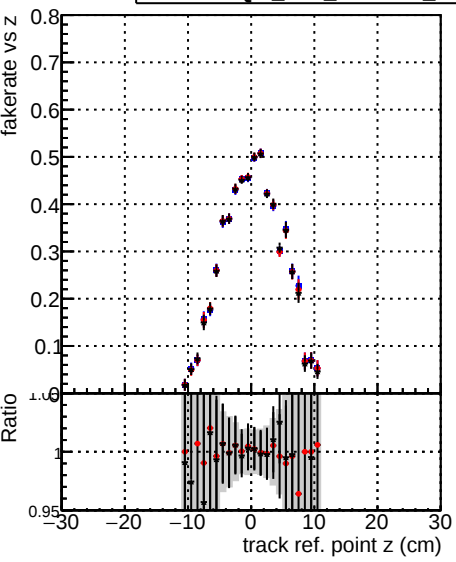
**Duplicates Rate vs vertpos**



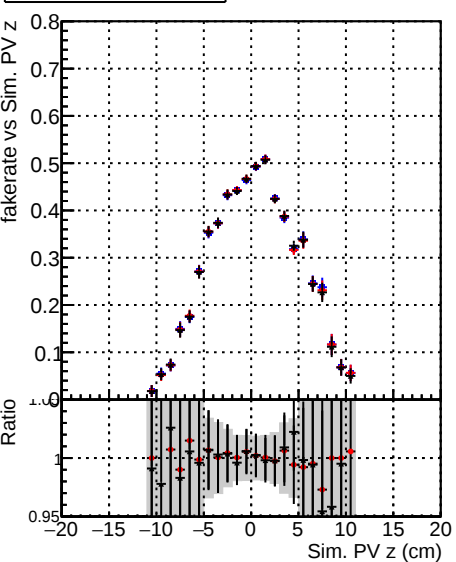
**Pileup rate vs vertpos**



**Fake rate vs v**



**Fake rate vs. sim PV z**



**Duplicates Rate vs sim PV z**



**Pileup rate vs. sim PV z**

