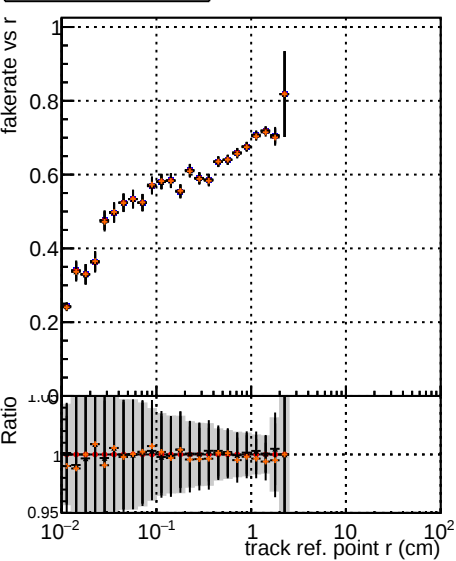


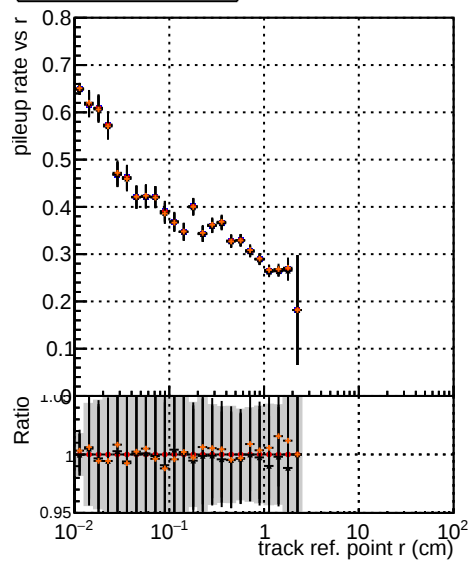
**Fake rate vs vertpos**



**Duplicates Rate vs vertpos**



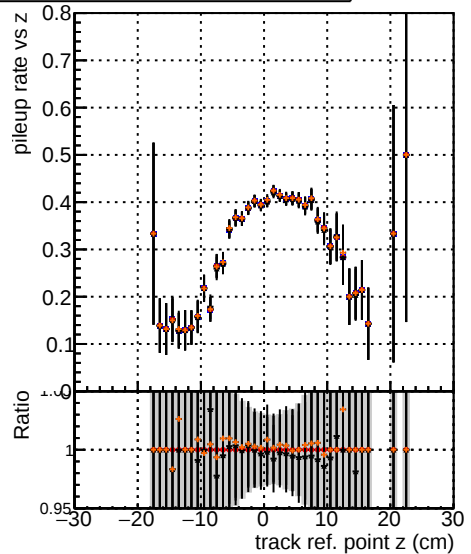
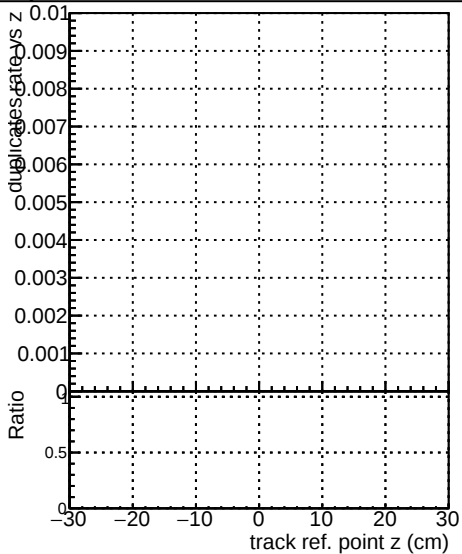
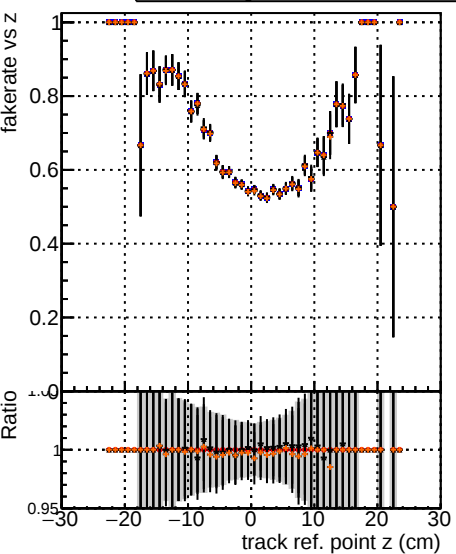
**Pileup rate vs vertpos**



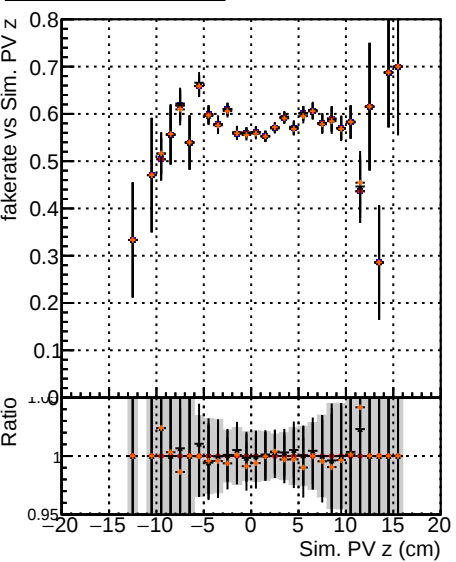
**Fake rate vs v**

Legend:

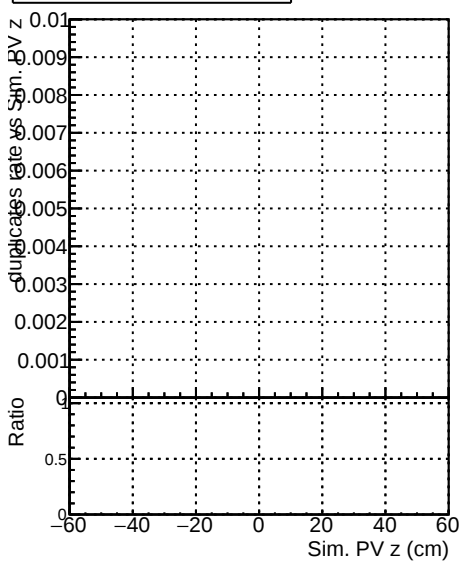
- original lowpt
- newbranch lowpt
- original lowpt pless
- newbranch lowpt pless



**Fake rate vs. sim PV z**



**Duplicates Rate vs sim PV z**



**Pileup rate vs. sim PV z**

