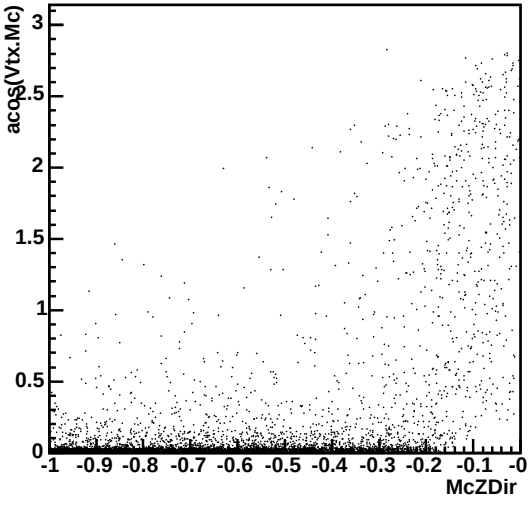
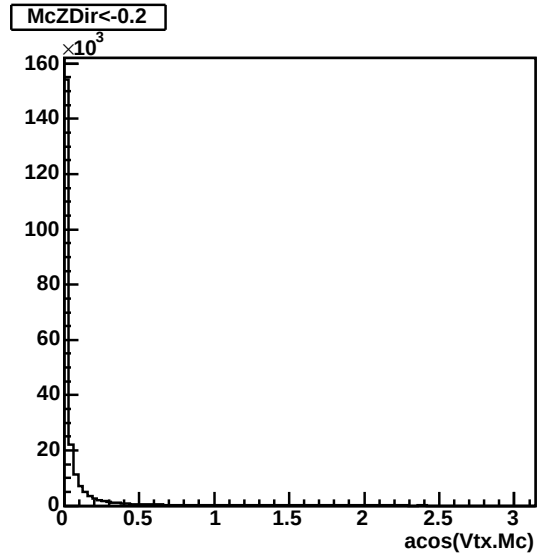
Trajectory and energy reconstruction

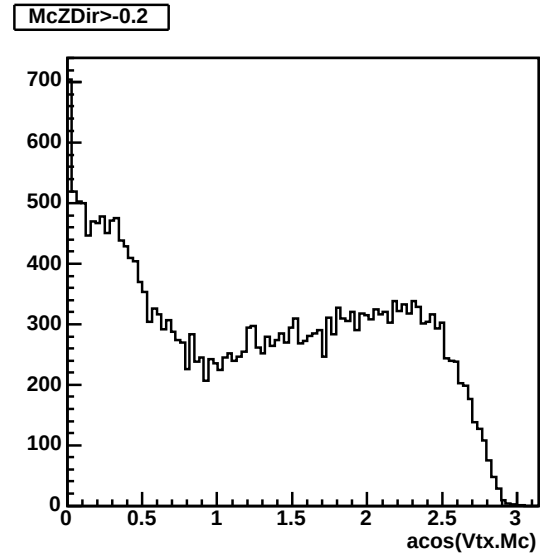
- allGamma-GR-HEAD1.617-mod-merit-TKR-prune.root
- very large incoming angles events
- high energy events

Why not always use the tracker info ?

Not very accurate when McZDir>-0.2

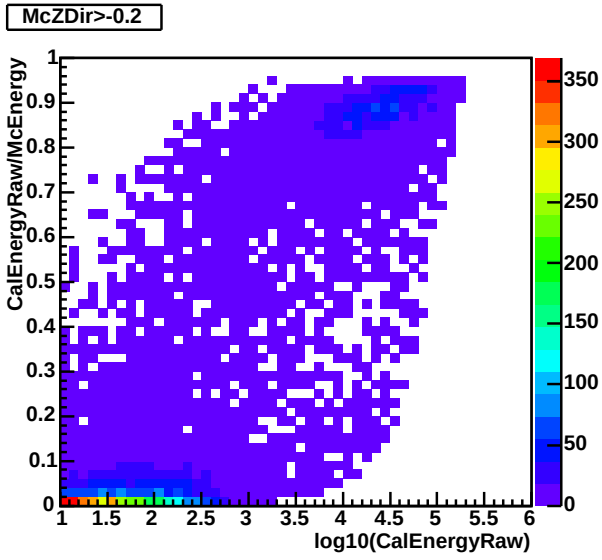


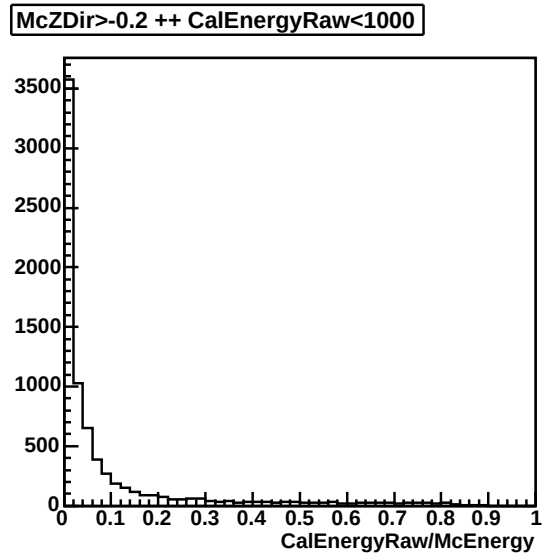


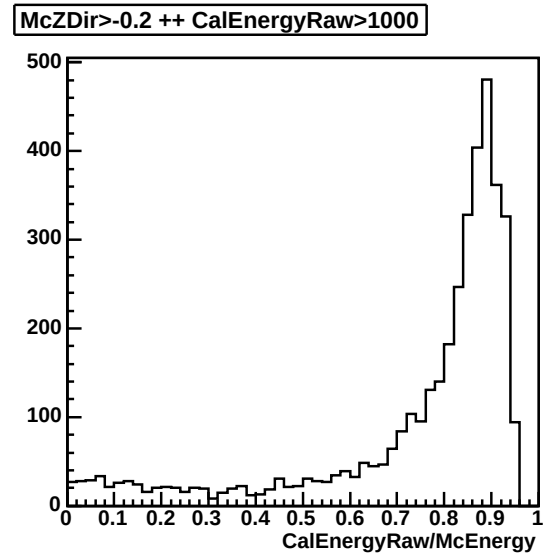


What kind of events for McZDir>-0.2 ?

McZDir>-0.2 : CalEnergyRaw>1000 implies good events !

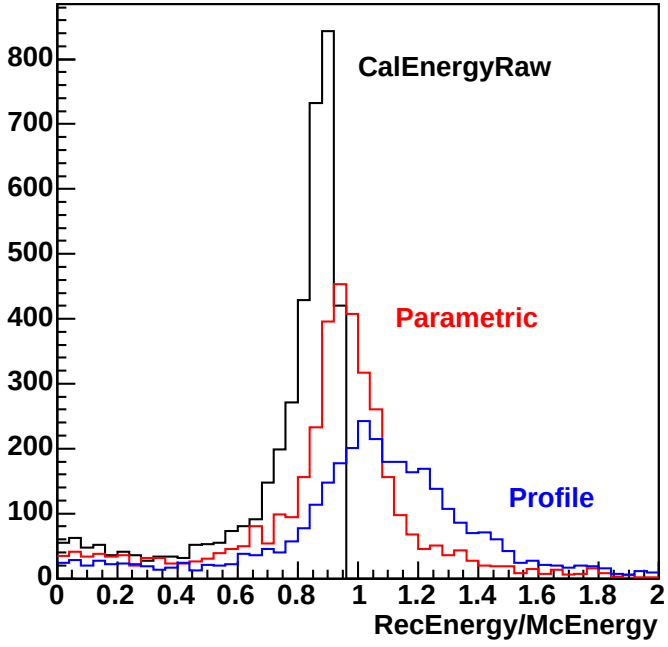


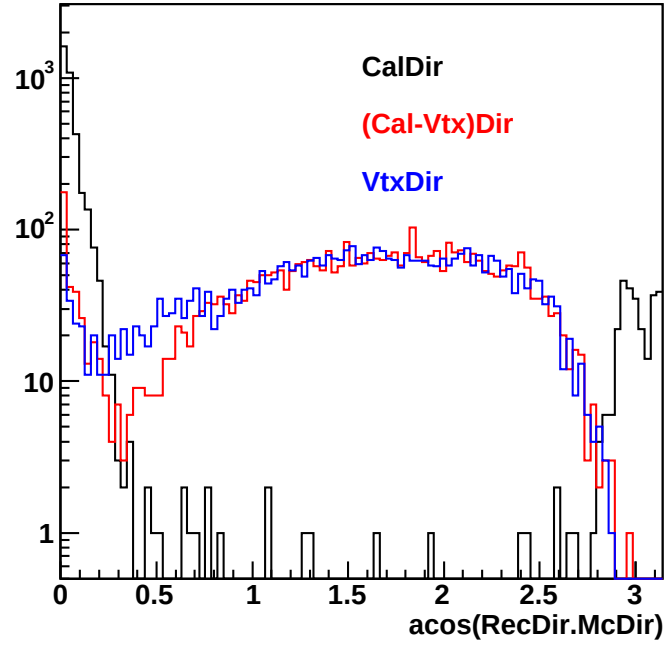




McZDir>-0.2 and CalEnergyRaw>1000

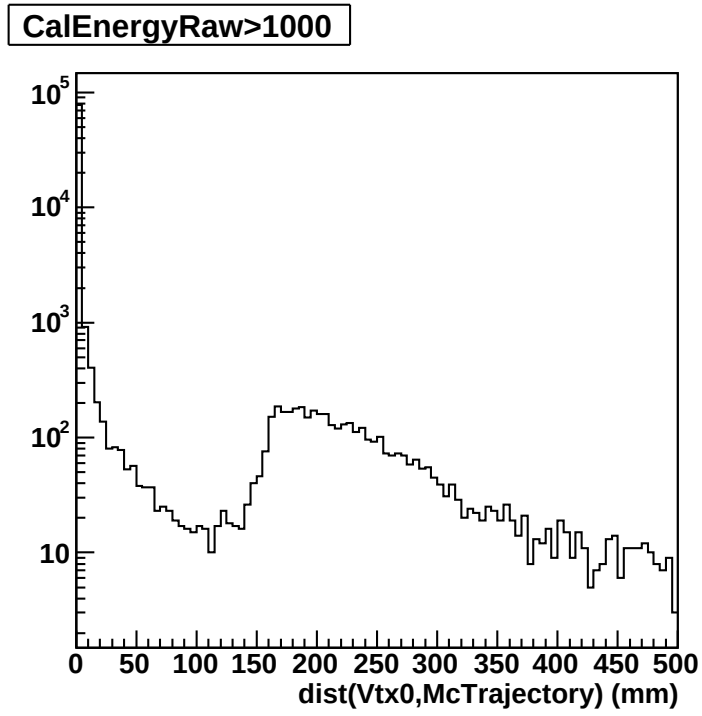
- Parametric : vtx0 -> Cal centroid
- Profile : only tracker information
- No real improvement in E resolution for these events
- Cal cluster gives the best direction information

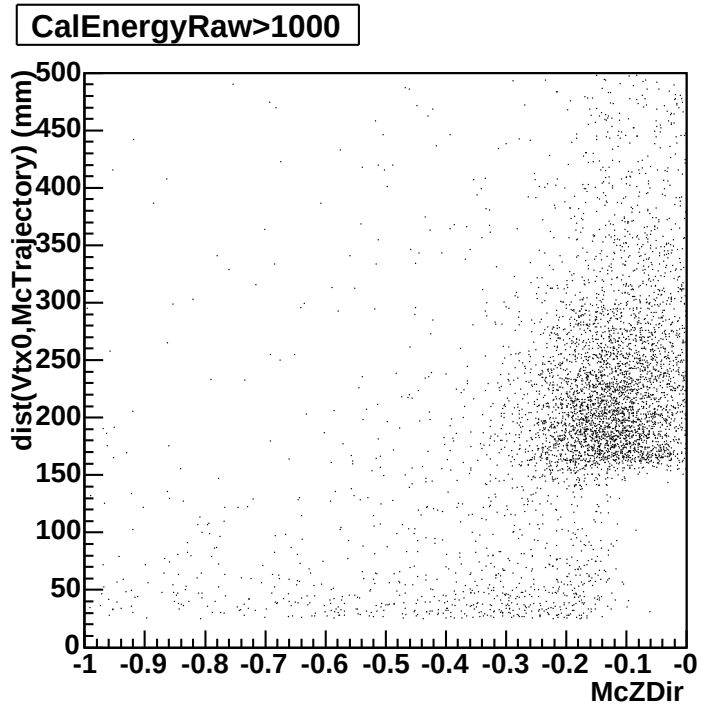




What does happen in the tracker ?

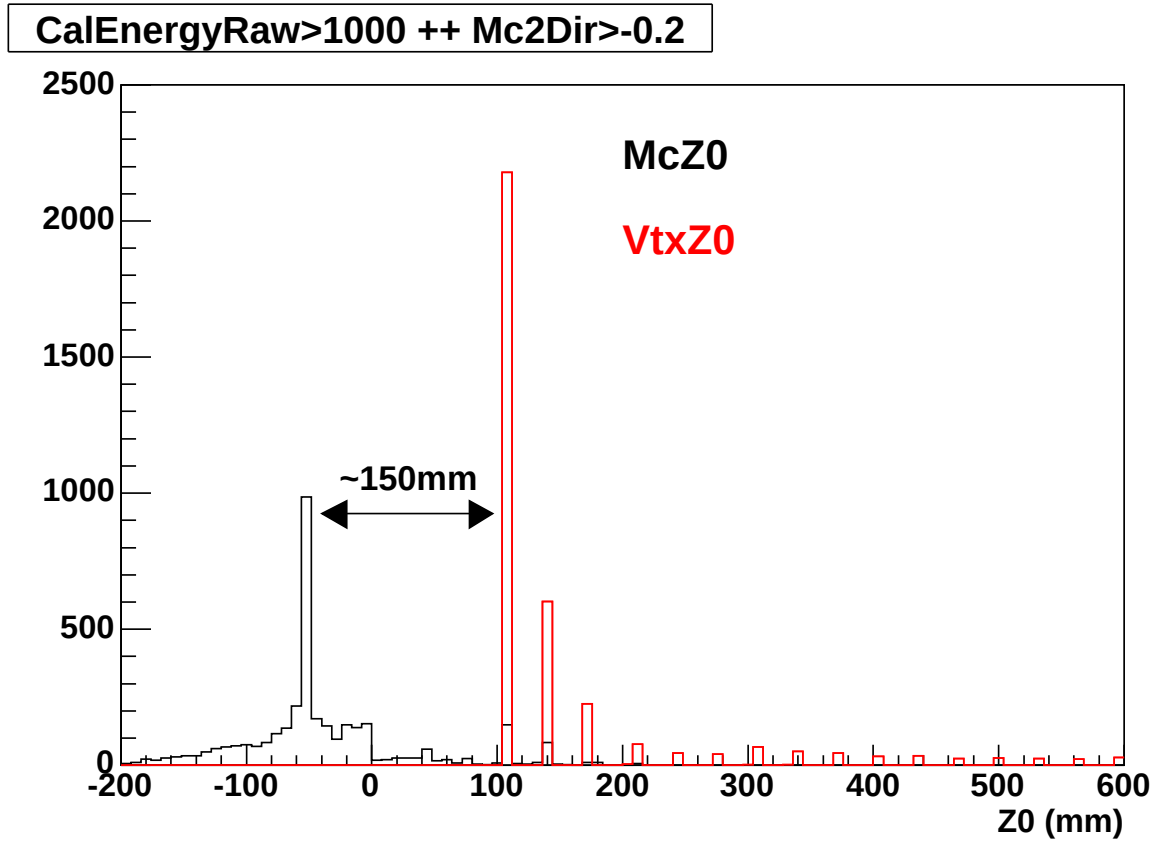
- distance of Vtx0 to the Mc trajectory
- 150 mm offset when McZDir>-0.2





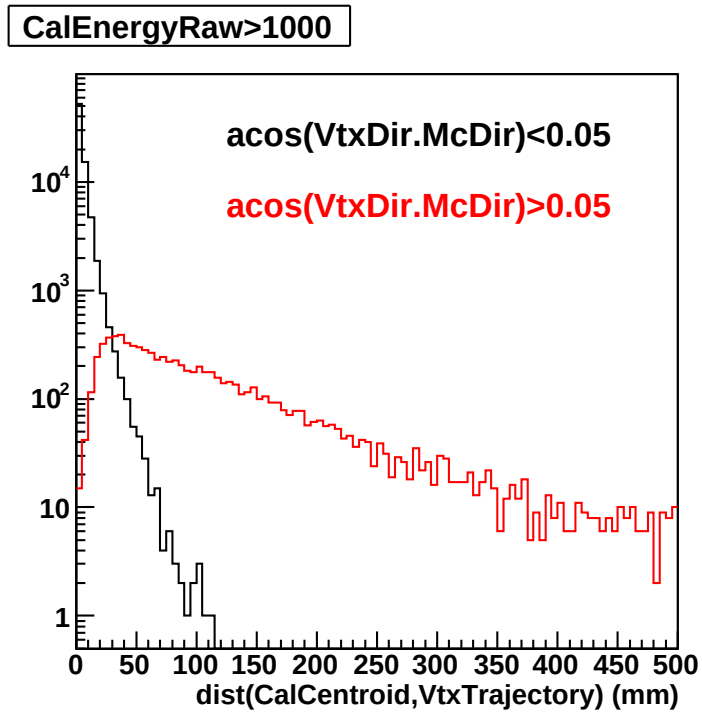
dist(vtx0,McTrajectory)>150

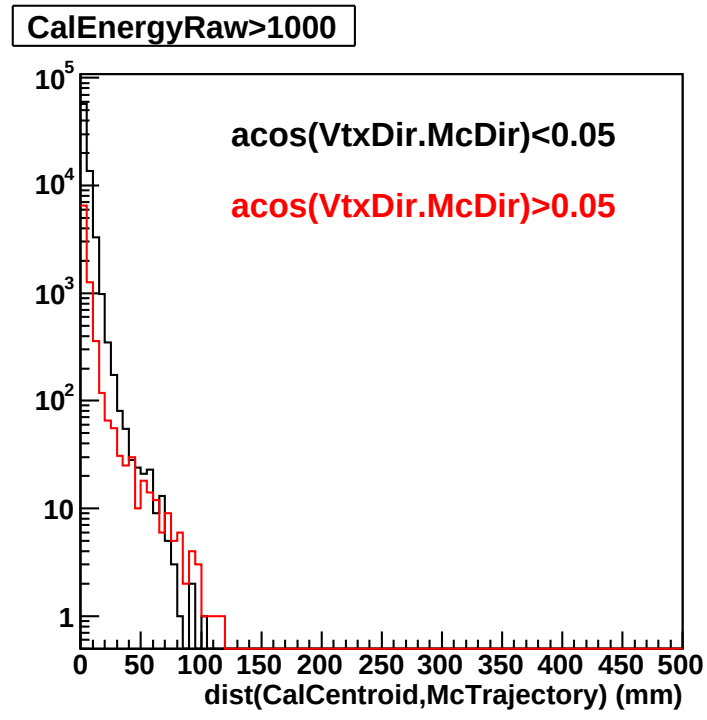
- first interaction in cal
- backsplash in the first tracker layer ?



How to know when vtx is bad

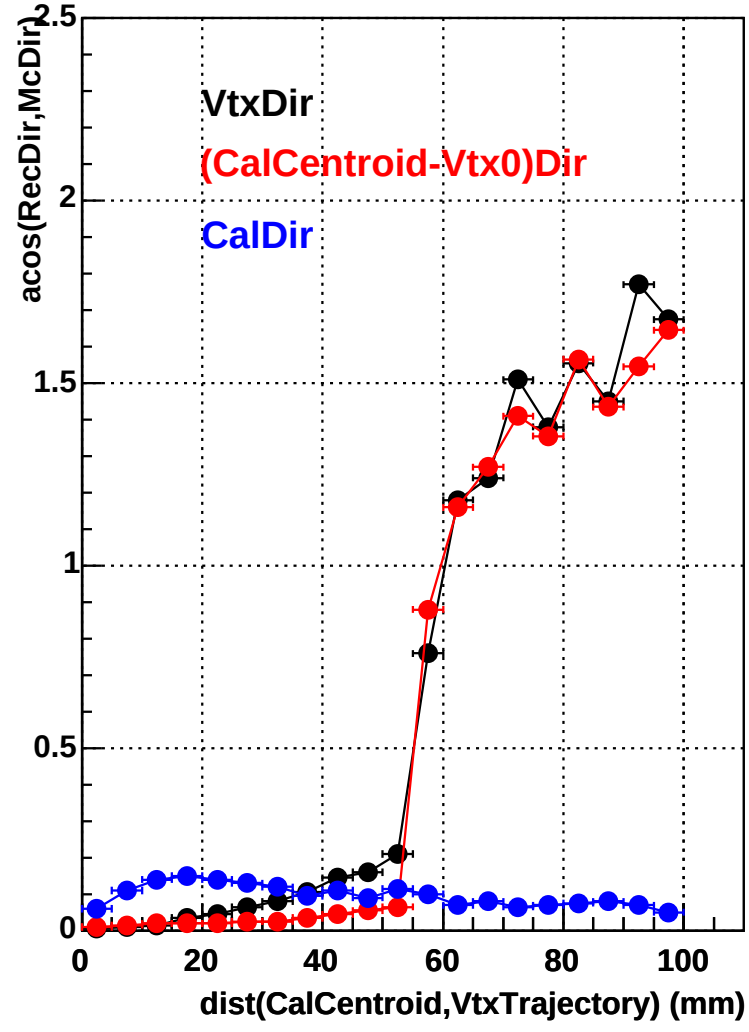
- Left : distance of Cal centroid to the vtx trajectory
- Right : distance of Cal centroid to the MC trajectory



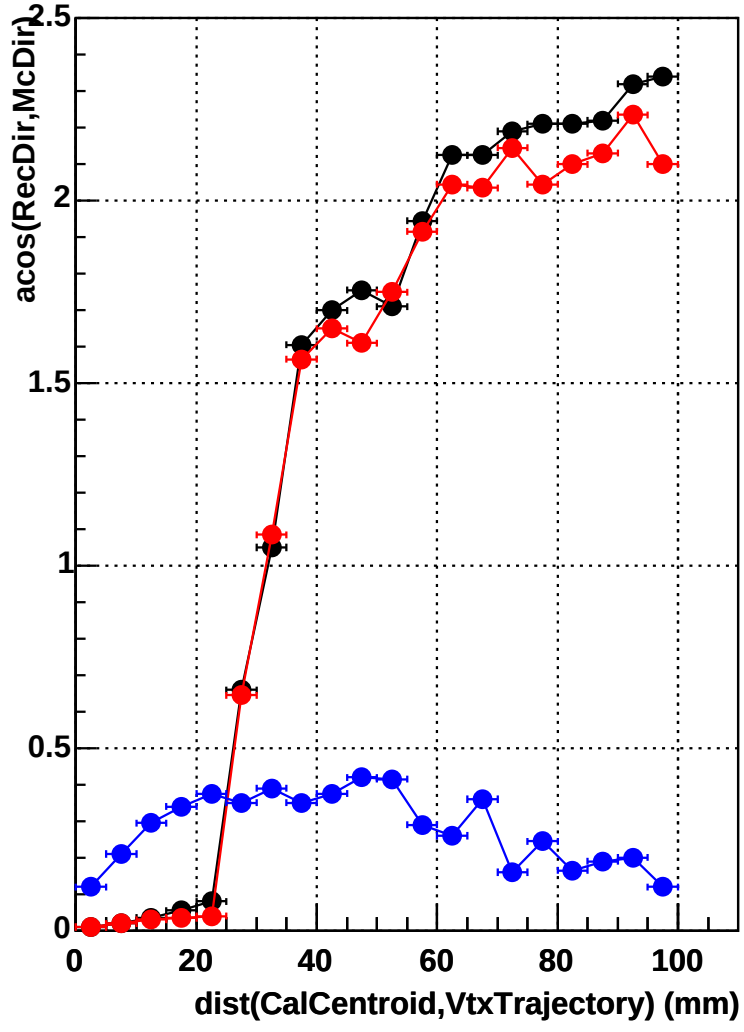


PSF vs CalTrackDoca

68% containment

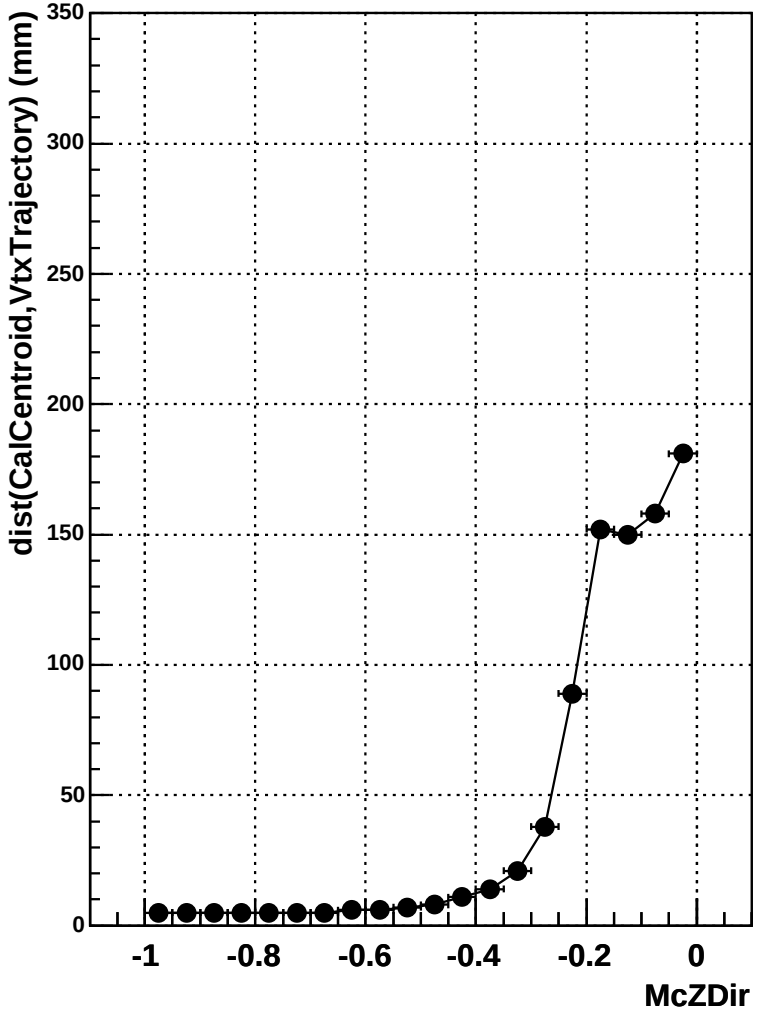


90% containment

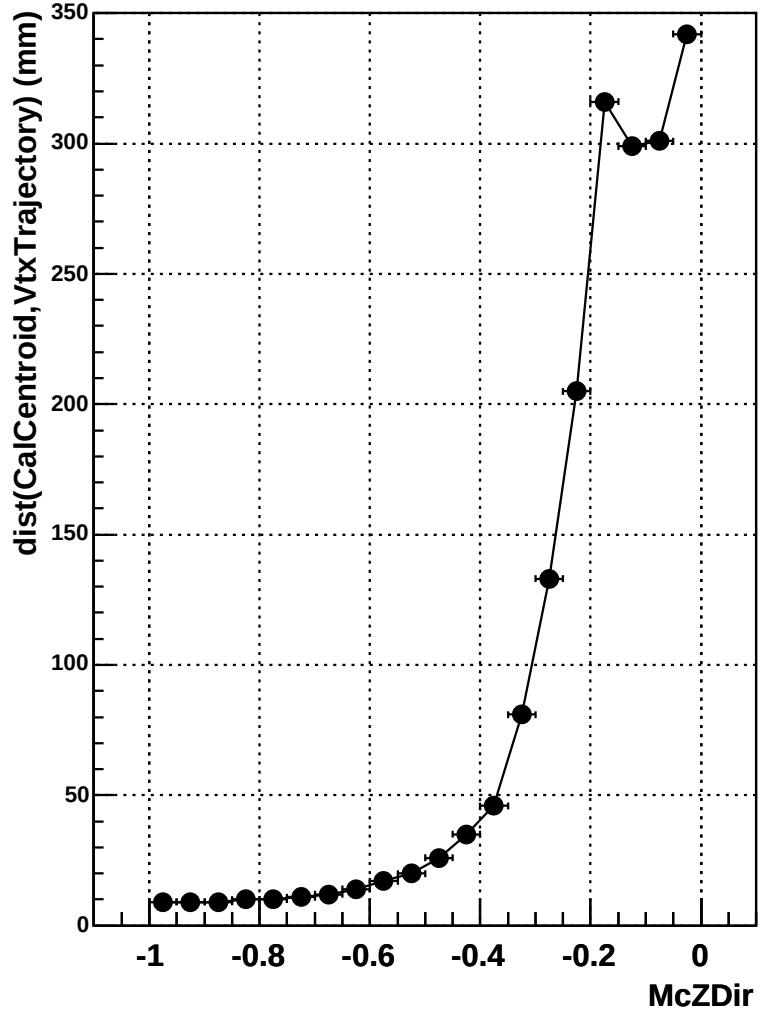


CalTrackDoca containment

68% containment



90% containment



Conclusions

- CalTrackDoca allows us to select good vtx events
- and to switch to cal cluster information