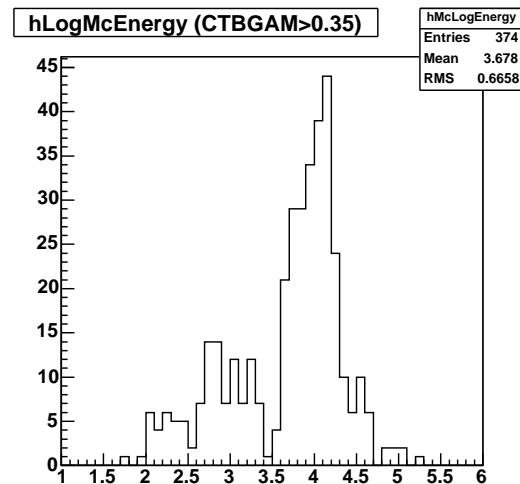
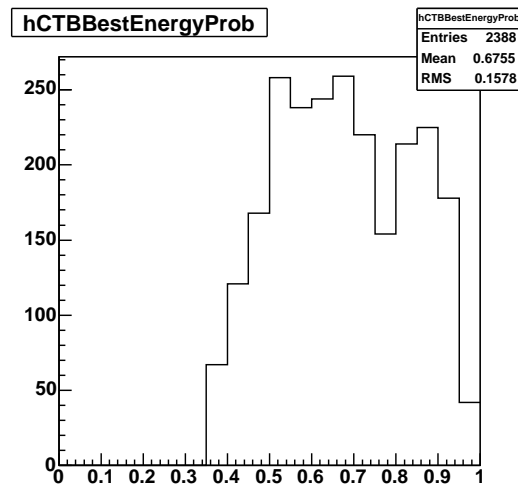
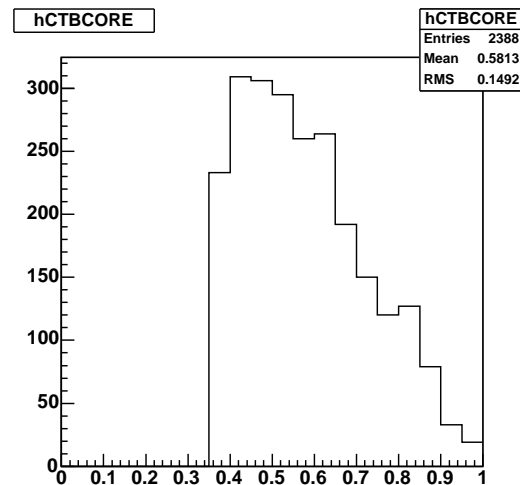
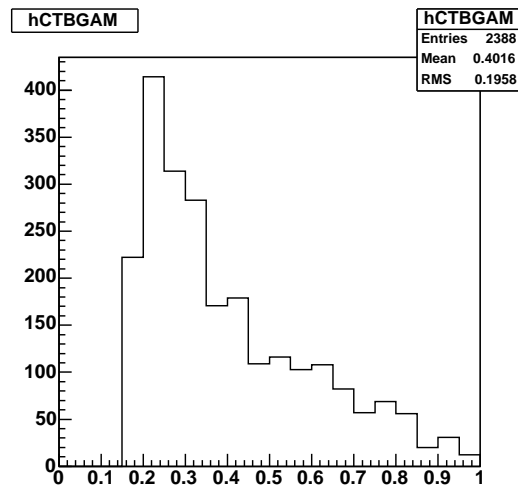


DC2 background and beamtest

- looking at the residual background of DC2
- looking at possible test beam configurations

backgndDC2-v7r3p5-concat-CTnew.root

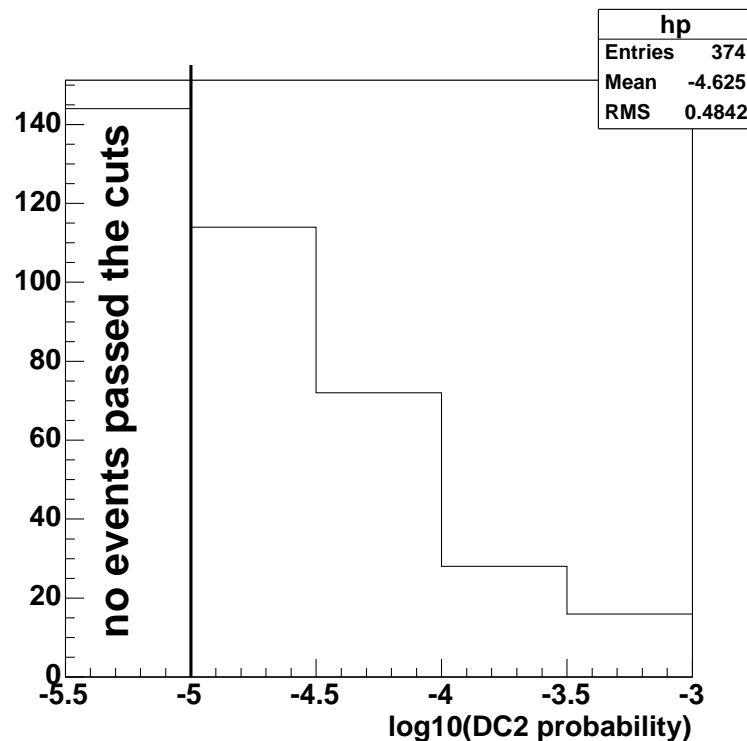
- Residual-Bkg-List-All.txt : 2388 evts
- requiring that CTBGAM>0.35 : 374 proton evts



Class A probability

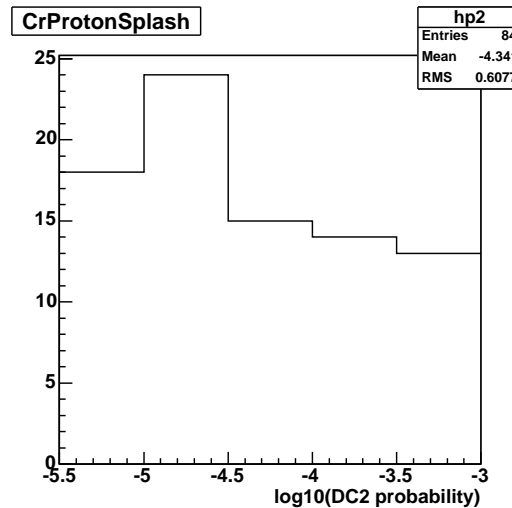
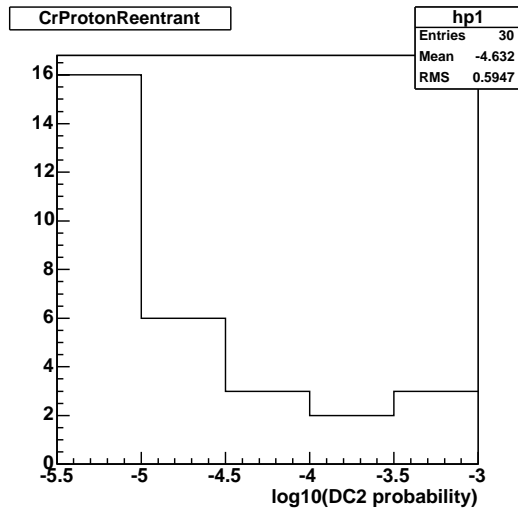
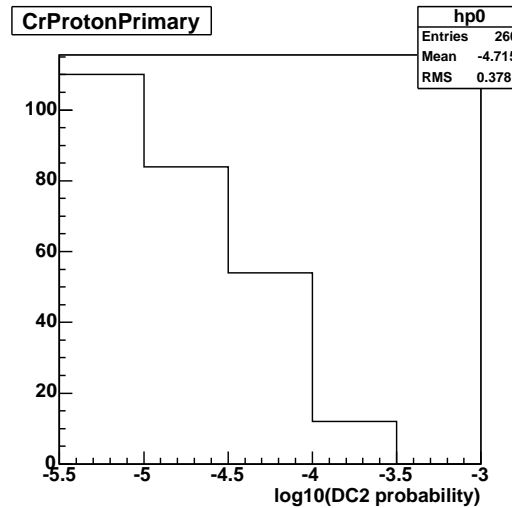
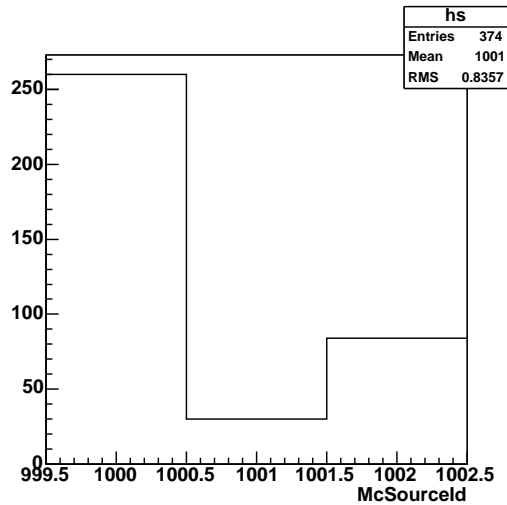
For each of these 374 proton events :

- simulating 40000/70000 protons with the MC configuration of the event (McEnergy,McX0,...)
- obtaining the probability to pass DC2 cuts (Class A : CTBGAM>0.5)



Three proton sources

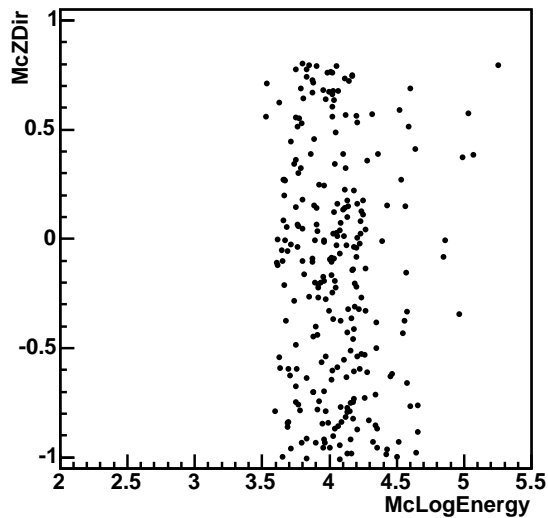
CrProtonPrimary - CrProtonReentrant - CrProtonSplash



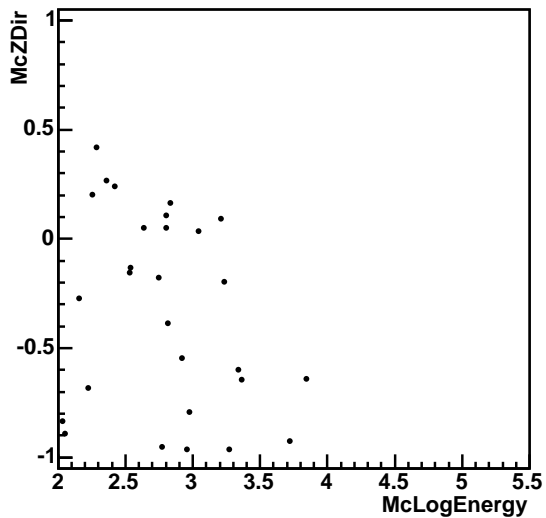
Three proton sources

- CrProtonPrimary : around 10 GeV
- CrProtonSplash : around 1 GeV

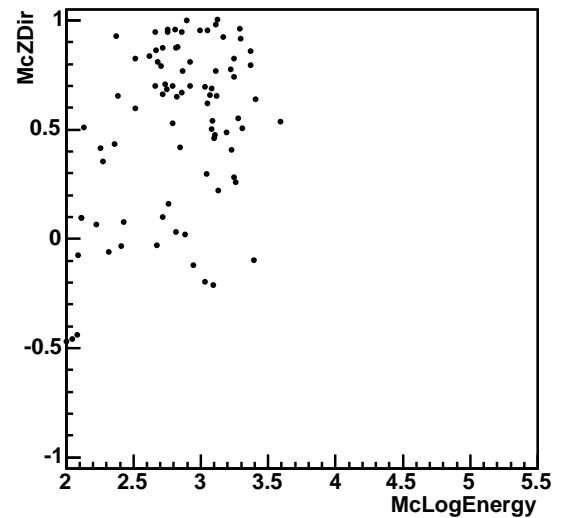
CrProtonPrimary



CrProtonReentrant



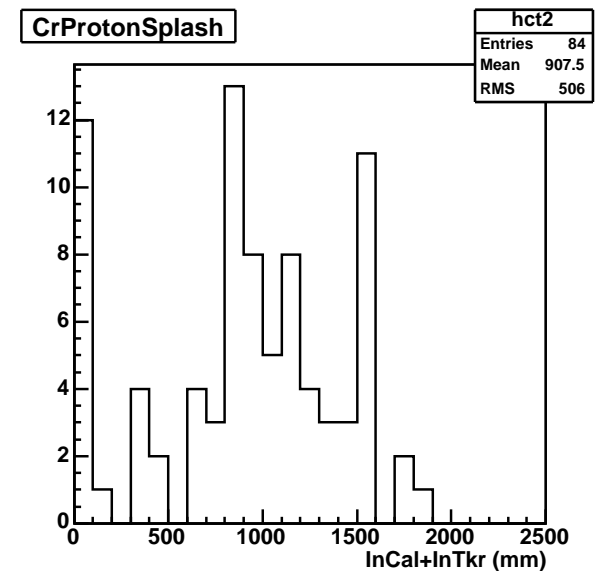
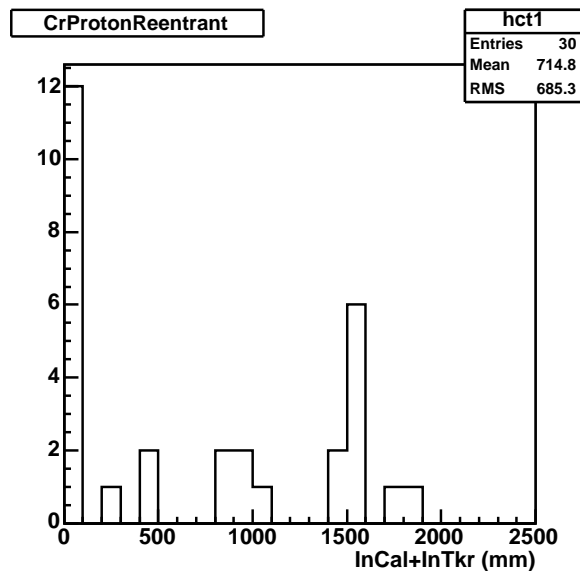
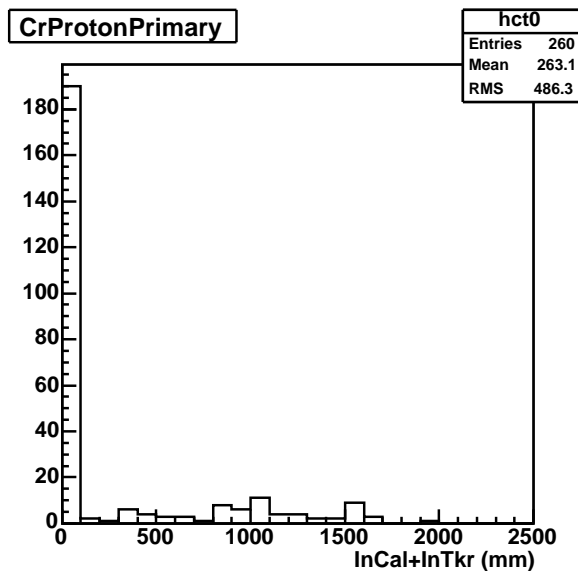
CrProtonSplash



Where do they pass through ?

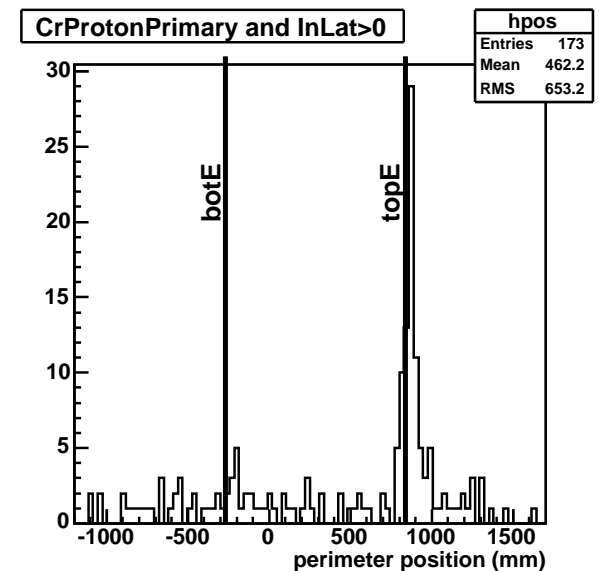
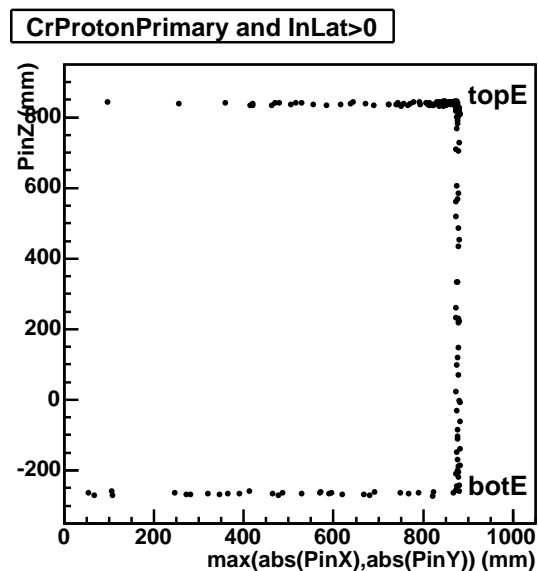
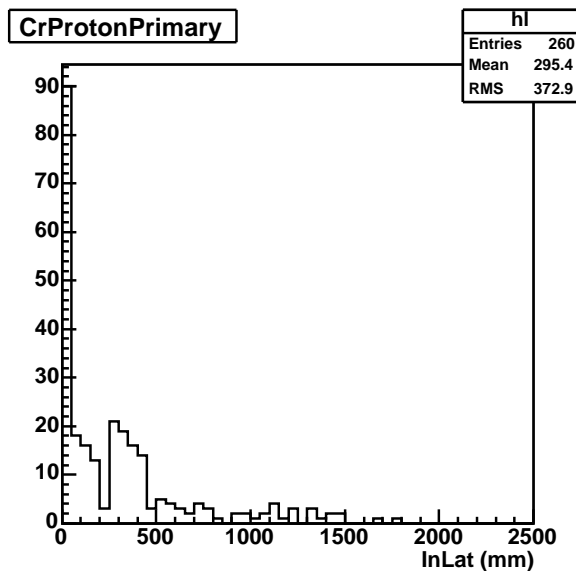
defining three volumes :

- Tkr : $-2 \times 374.5 < X, Y < 2 \times 374.5$ and $-50 < Z < 600$
- Cal : $-2 \times 374.5 < X, Y < 2 \times 374.5$ and $-210 < Z < -50$
- Lat : $-880 < X, Y < 880$ and $-270 < Z < 840$ and not in Tkr nor Cal



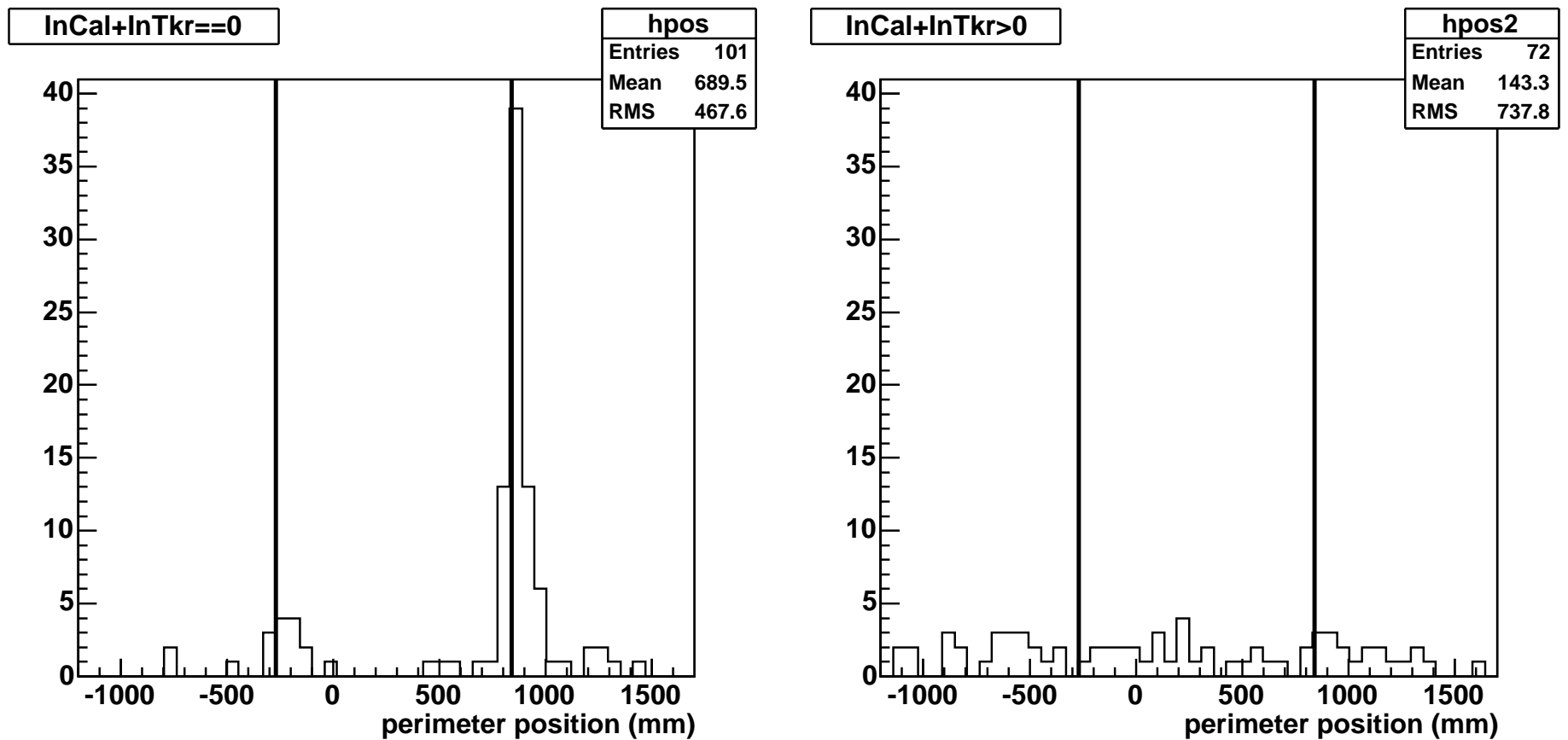
Where do they enter ?

- InLat==0 \Rightarrow outside LAT : 87 events
- when InLat>0 : Pin is the impact point on the “LAT” box
- accumulation around the edges



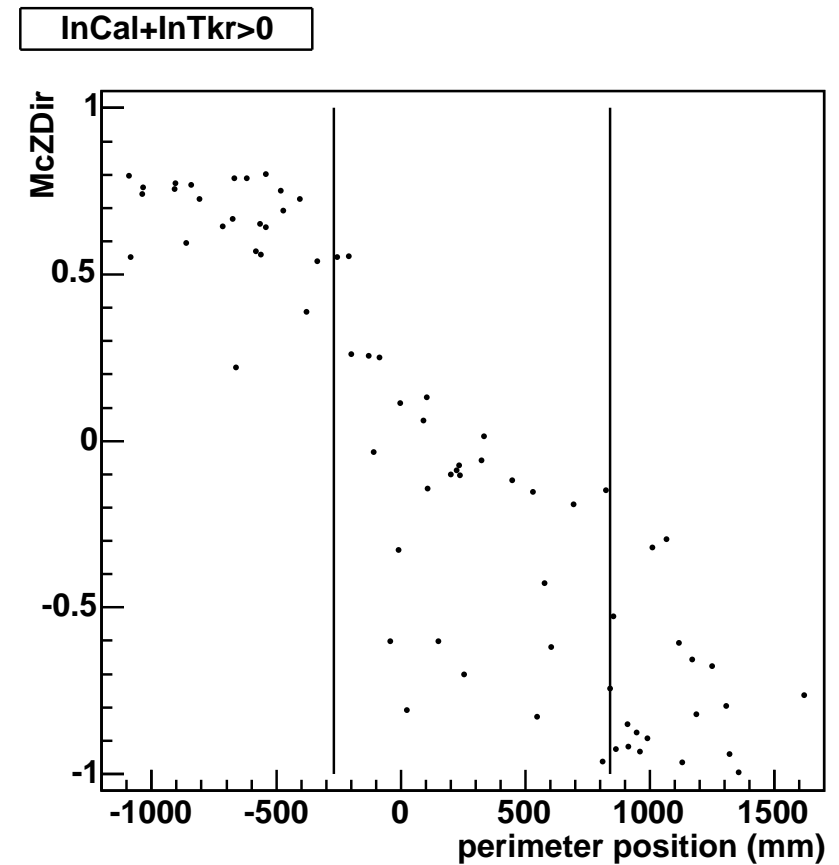
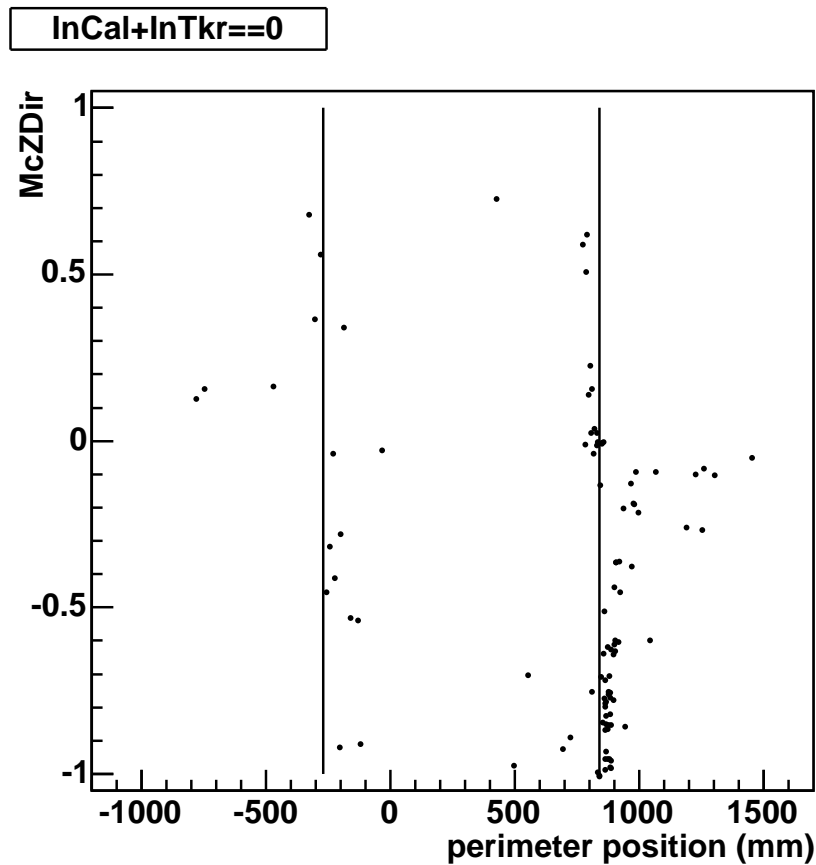
Primary population

when $\ln\text{Cal}+\ln\text{Tkr} = 0 \Rightarrow$ around edges (mainly top edges)



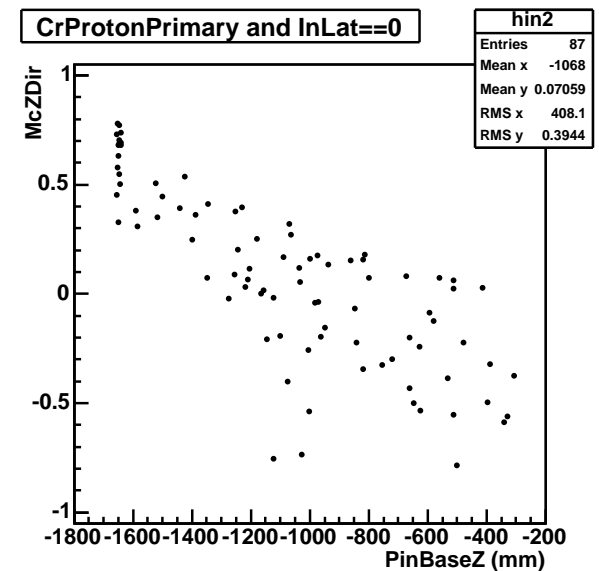
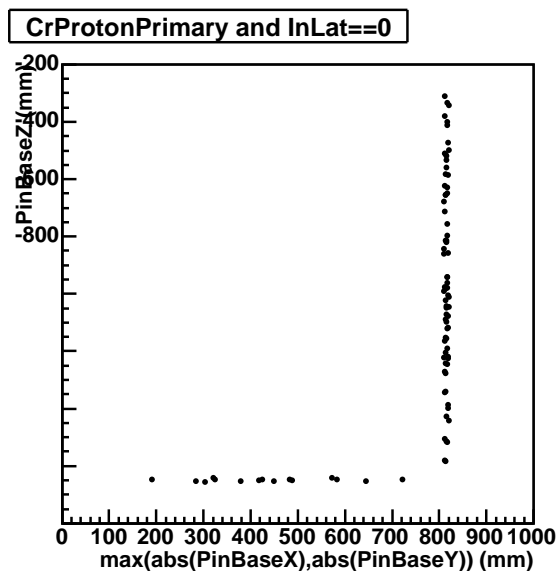
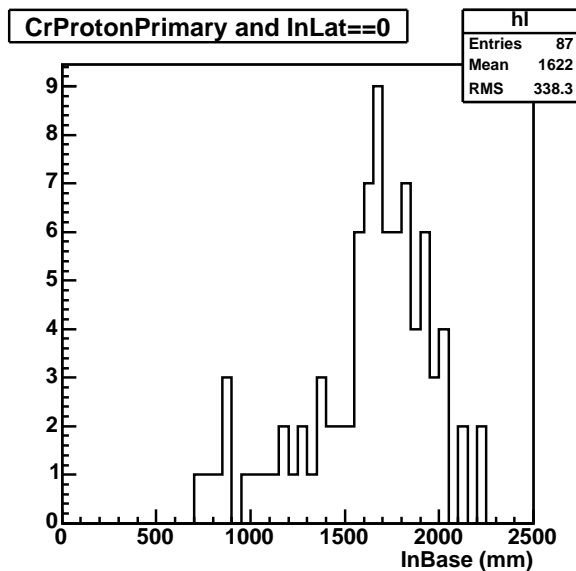
Primary population

top edges population : mainly downwards protons



Outside LAT primary population

defining volume Base : $-820 < X, Y < 820$ and $-1650 < Z < -270$



Splash population

