

Samples

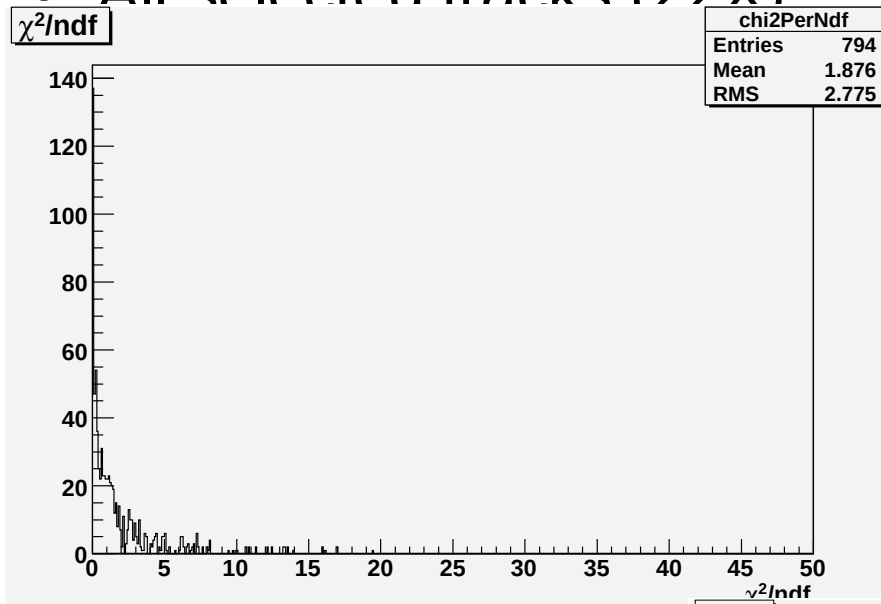
- 22X: full simulation + BSC L1+ technical trigger
 - `rfio:/castor/cern.ch/user/b/boudoul/220/BH/BSCTrigger/Alcareco/TkAlBeamHalo_1.root`
 - `rfio:/castor/cern.ch/user/b/boudoul/220/BH/BSCTrigger/Alcareco/TkAlBeamHalo_2.root`
 - `rfio:/castor/cern.ch/user/b/boudoul/220/BH/BSCTrigger/Alcareco/TkAlBeamHalo_3.root`
- For comparison: 20X sample
 - `rfio:/castor/cern.ch/cms/store/mc/CSA08/TkBeamHalo/ALCARECO/STARTUP_V2_TkAlBeamHalo_v3/0017/7648E9B0-AF59-DD11-8269-001E0B487196.root`
 - and others in the same dir

Track selection

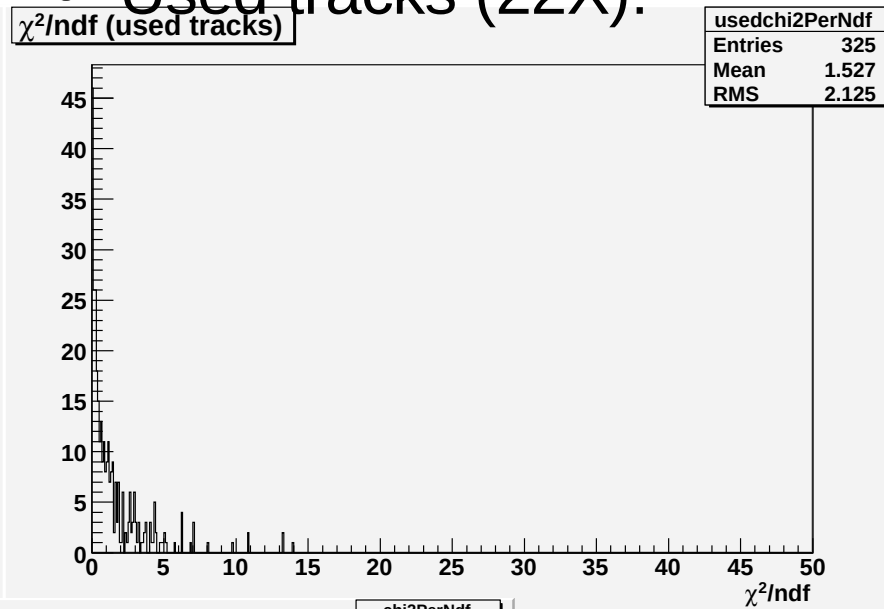
- Track collection: ALCARECOTkAlBeamHalo
- Track selection:
 - $ptMin = 0$.
 - $etaMin = -999$. / $etaMax = +999$.
 - $nHitMin = 4$ / $nHitMin2D = 2$
 - $chi2nMax = 50$.
 - $minMultiplicity = 1$
- Number of events: 57
- Nb. of selected tracks: 794
- Nb. of used tracks: 325

Normalized chi2

- All selected tracks (22X):

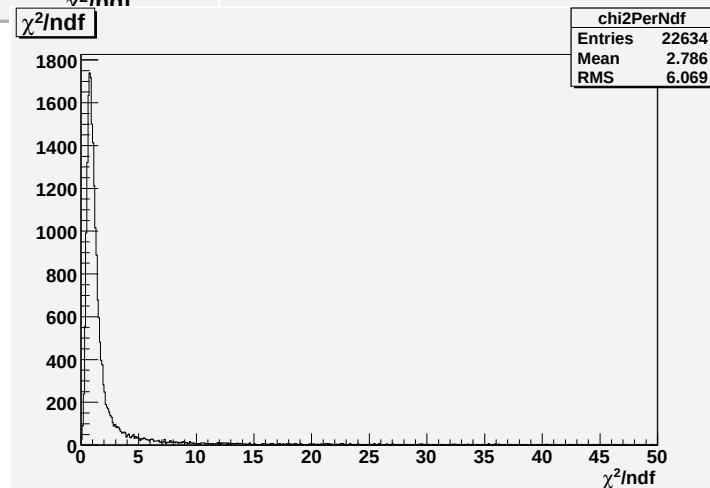


- Used tracks (22X):



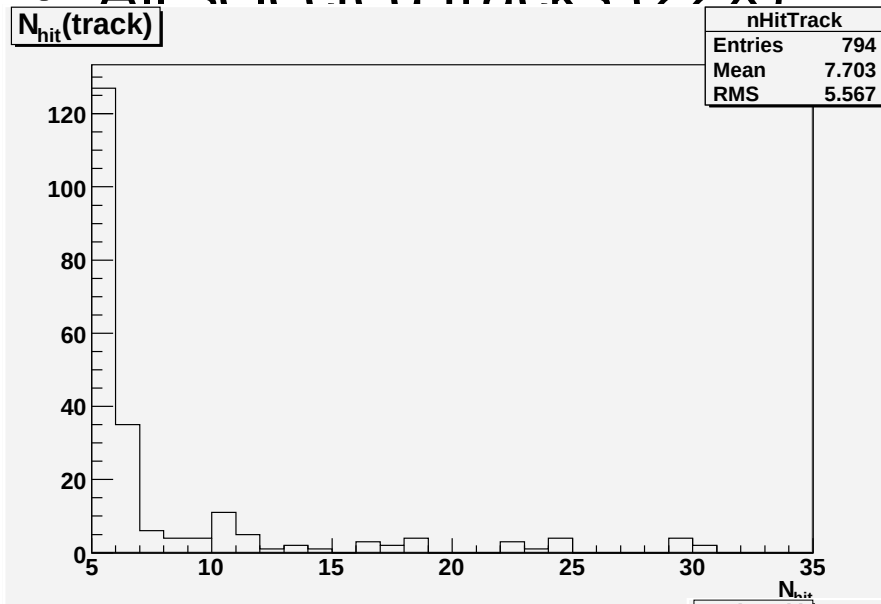
- 20X sample:

- all tracks: 22634
- (used tracks: 22419)

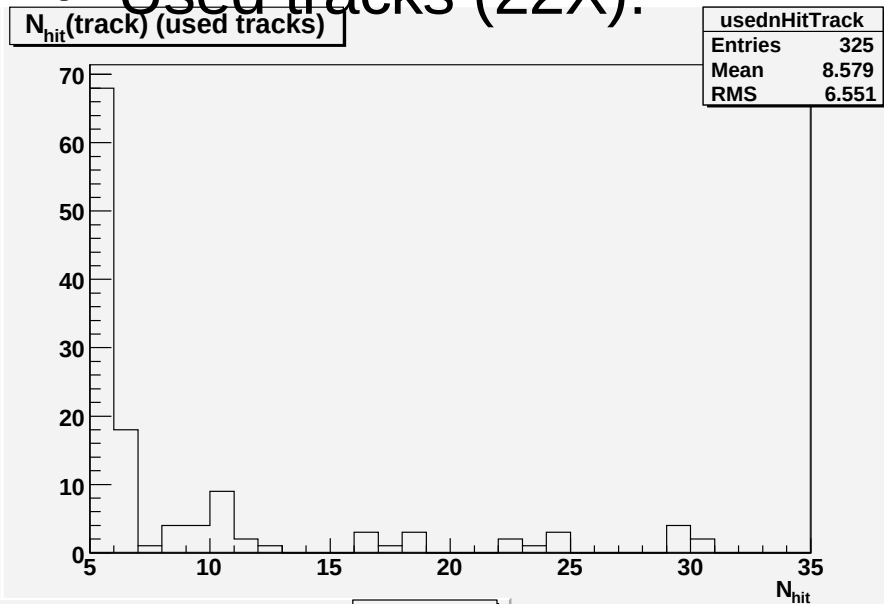


Number of Hits

- All selected tracks (22X):

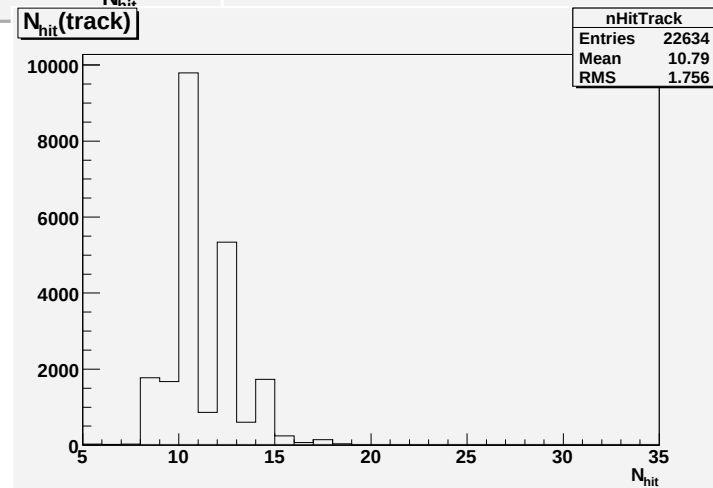


- Used tracks (22X):



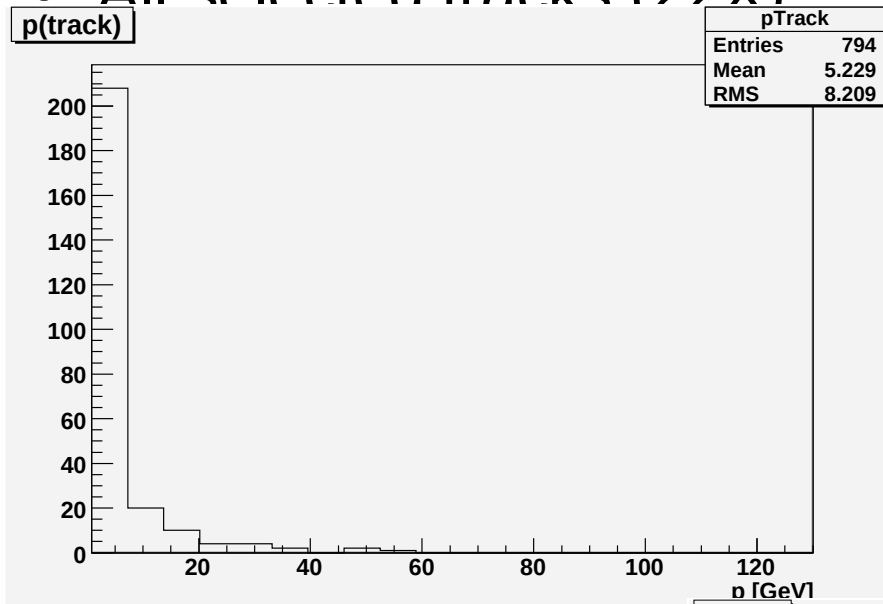
- 20X sample:

– selection: $nHit \geq 8$

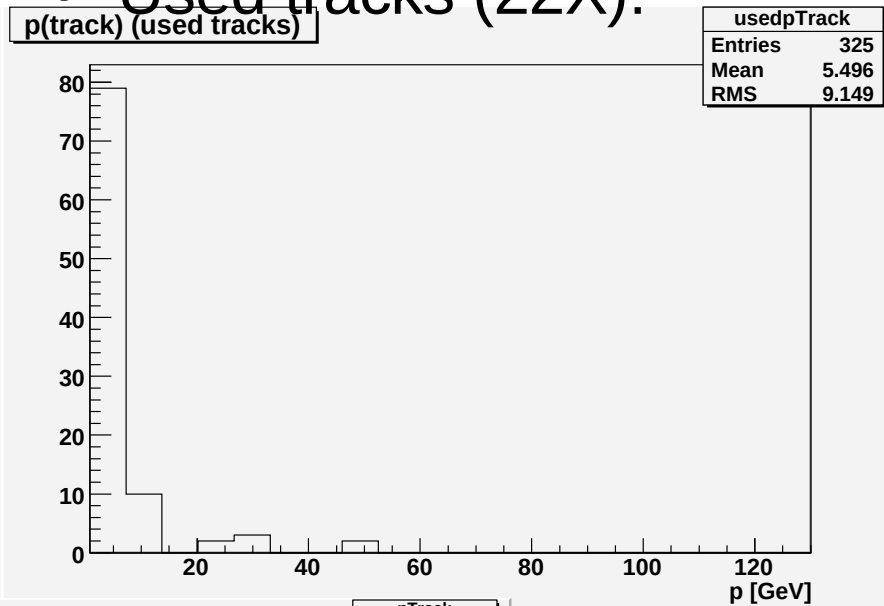


Track momentum p

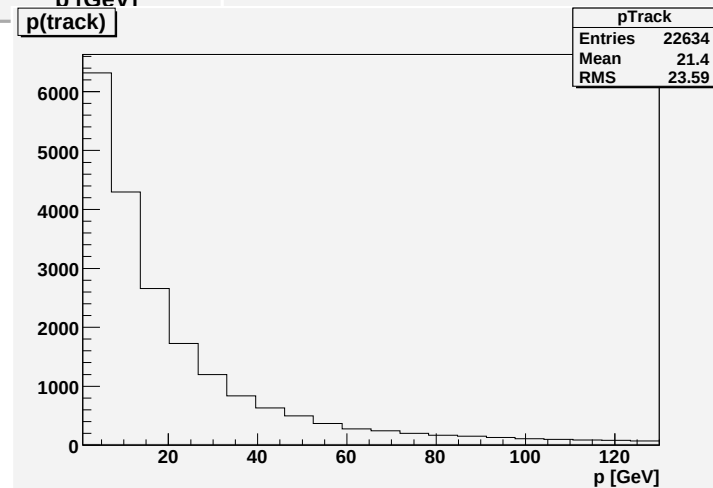
- All selected tracks (22X):



- Used tracks (22X):

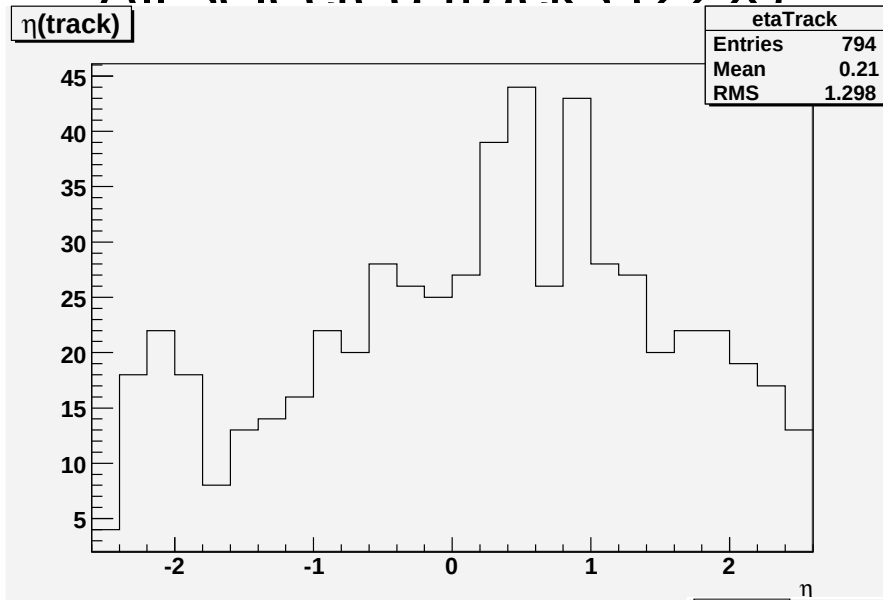


- 20X sample:

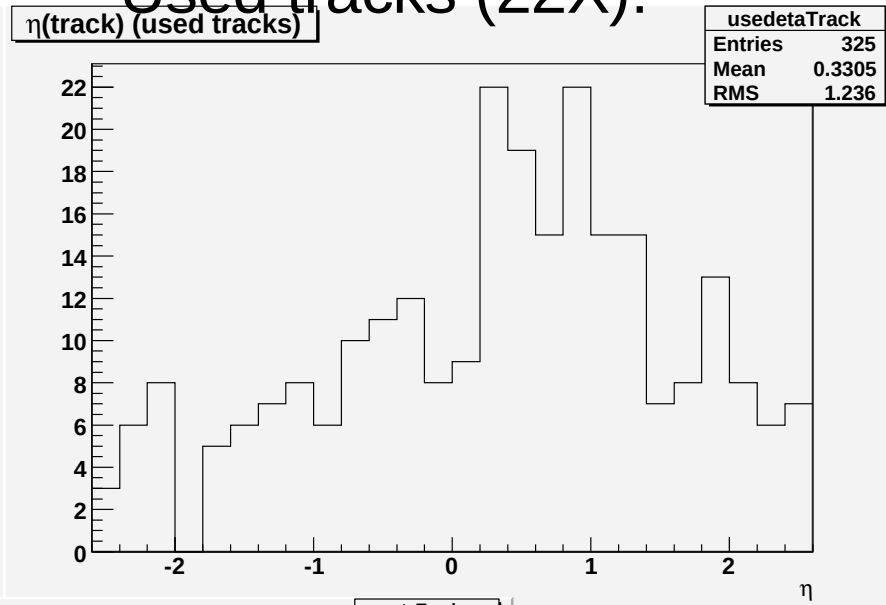


Track pseudo-rapidity eta

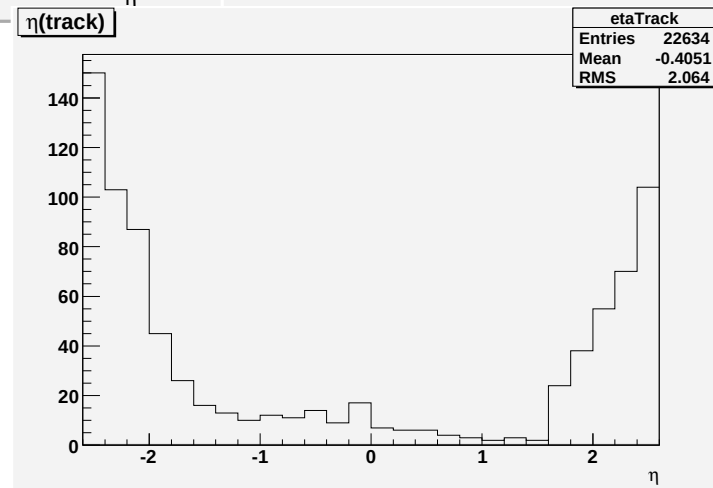
- All selected tracks (22X):



- Used tracks (22X):

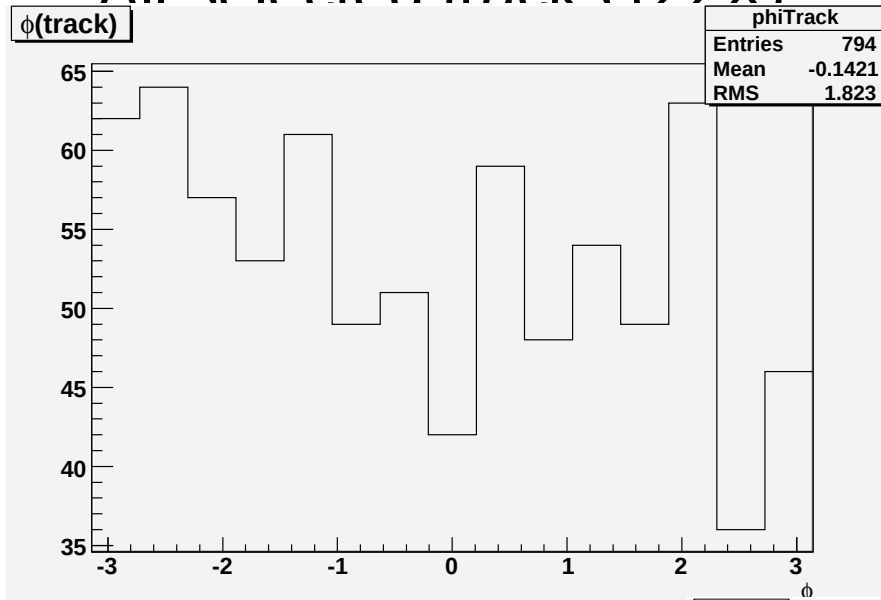


- 20X sample:

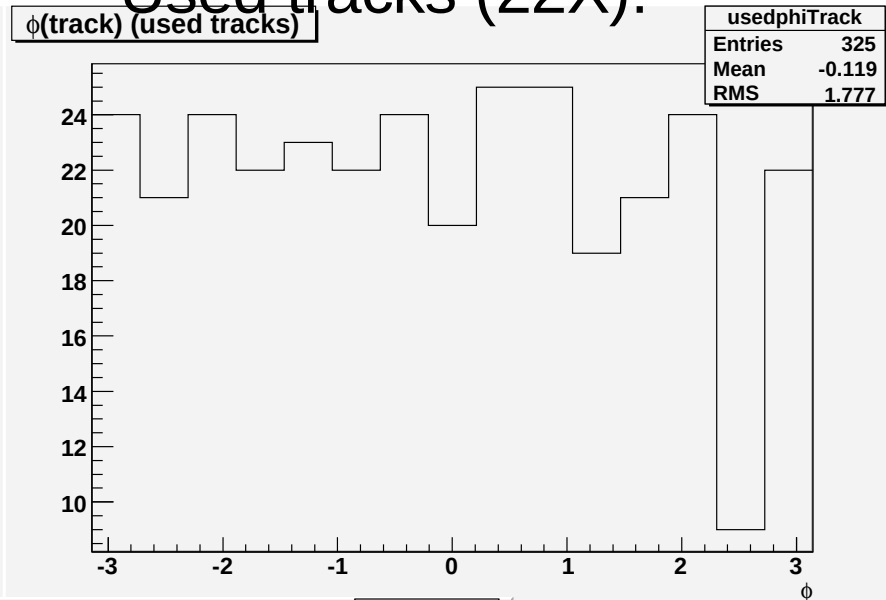


Track phi angle

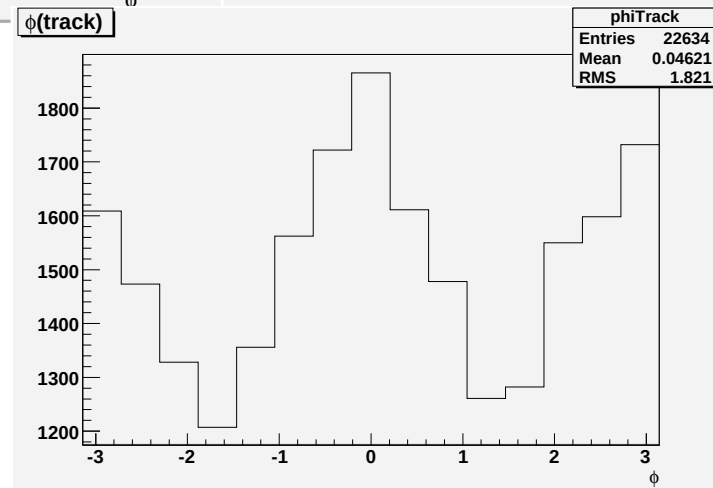
- All selected tracks (22X):



- Used tracks (22X):

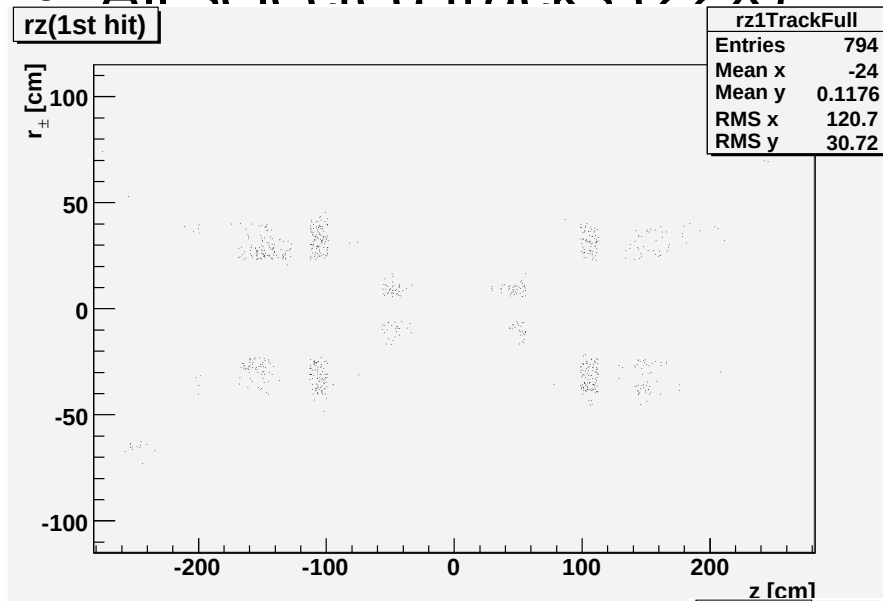


- 20X sample:

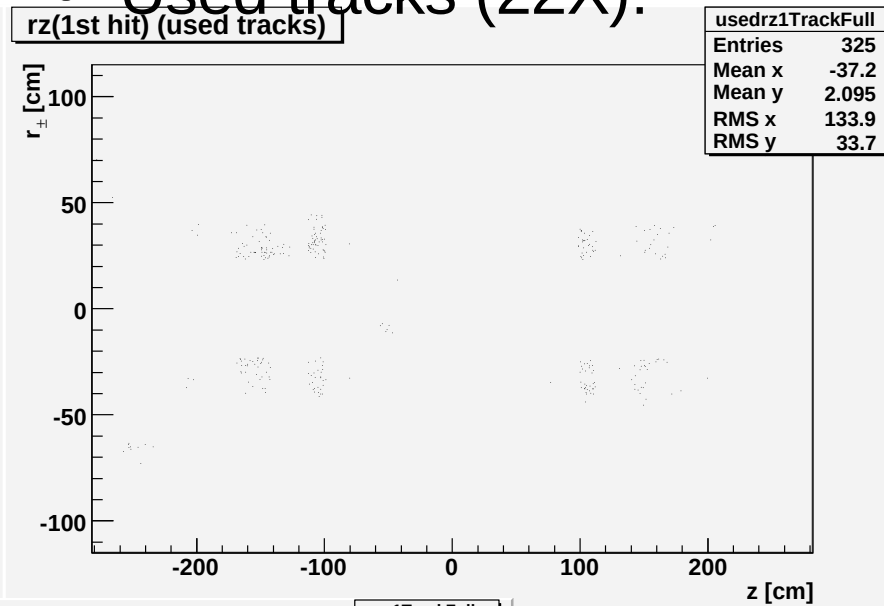


First Hit rz position

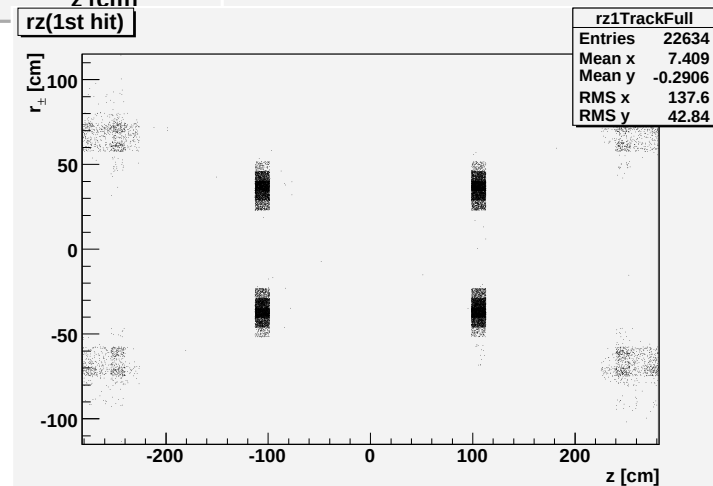
- All selected tracks (22X):



- Used tracks (22X):

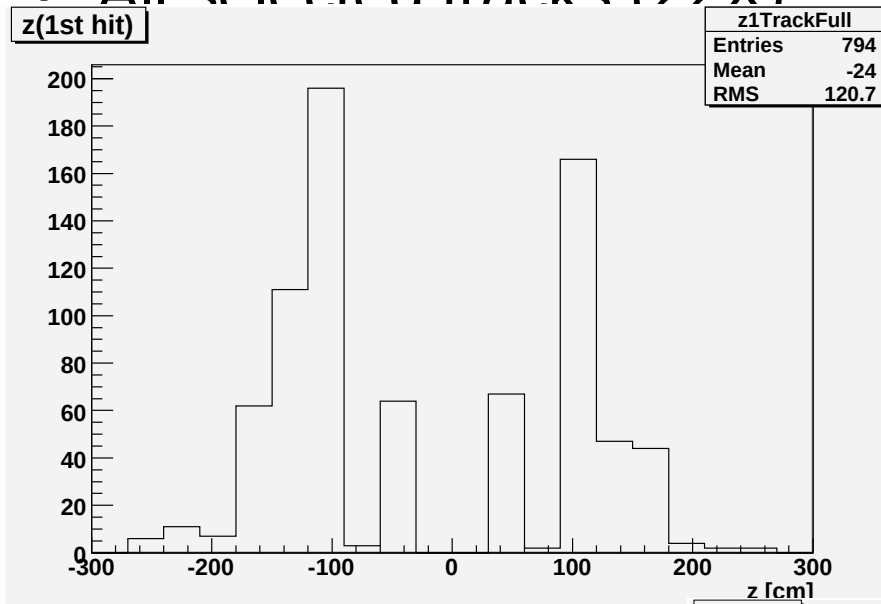


- 20X sample:

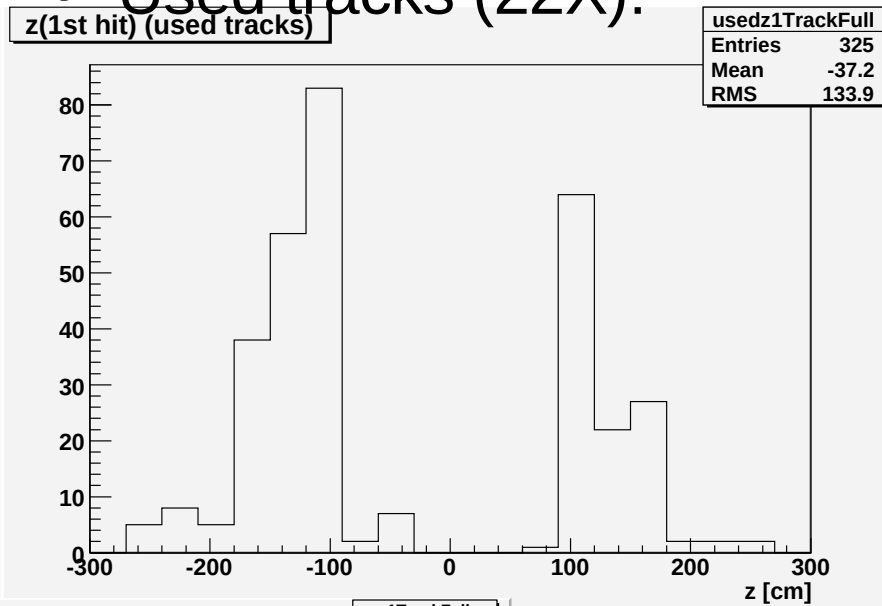


First Hit z position

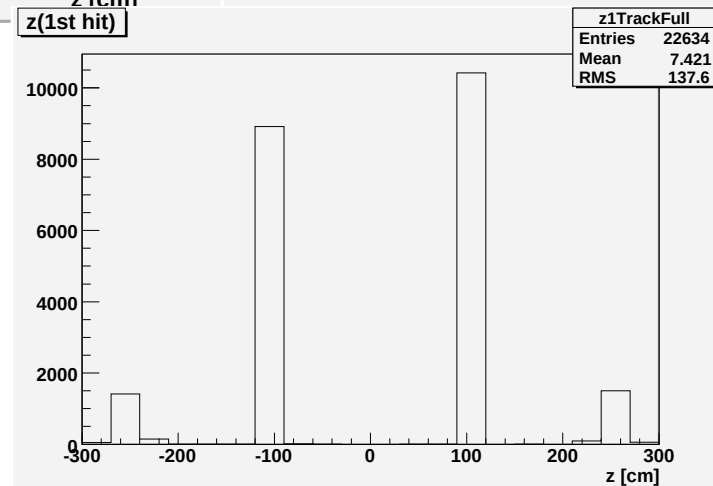
- All selected tracks (22X):



- Used tracks (22X):



- 20X sample:



Conclusions

- Strange features of the new samples:
 - high fraction of selected tracks are rejected by millepede (~50%): I will check why
 - eta distribution is not as expected
 - low number of hits
 - in comparison with 20X production:
 - different momentum spectrum
 - different phi distribution
 - different position of the first hit