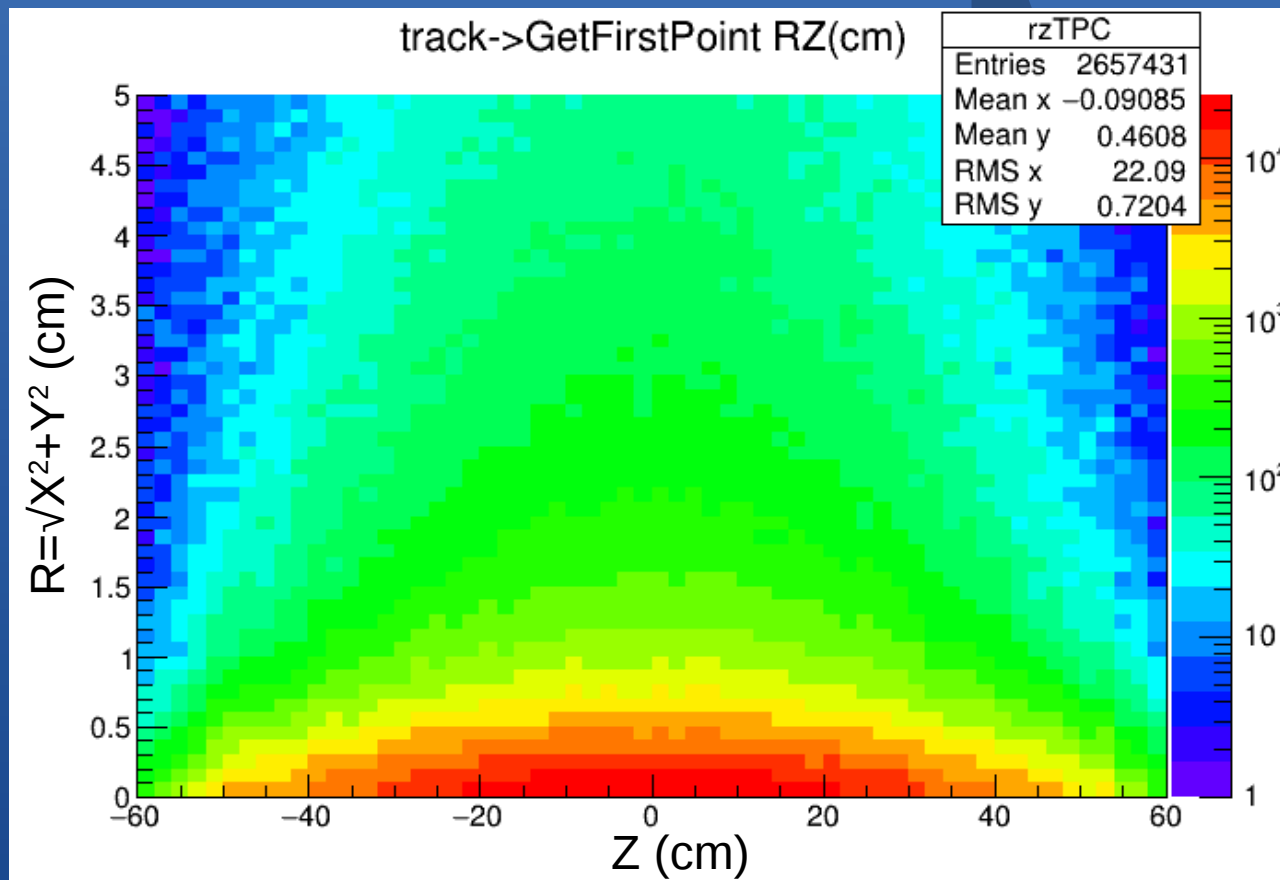


CF from MPD detector

- Physics model: vHLLE AuAu $\sqrt{s_{NN}}=11.5$ GeV
- MC: GEANT+MPD root
- Statistics: $1e4$ events
- Reconstructed CF
- Anti-merging and anti-splitting cut
- Efficiency

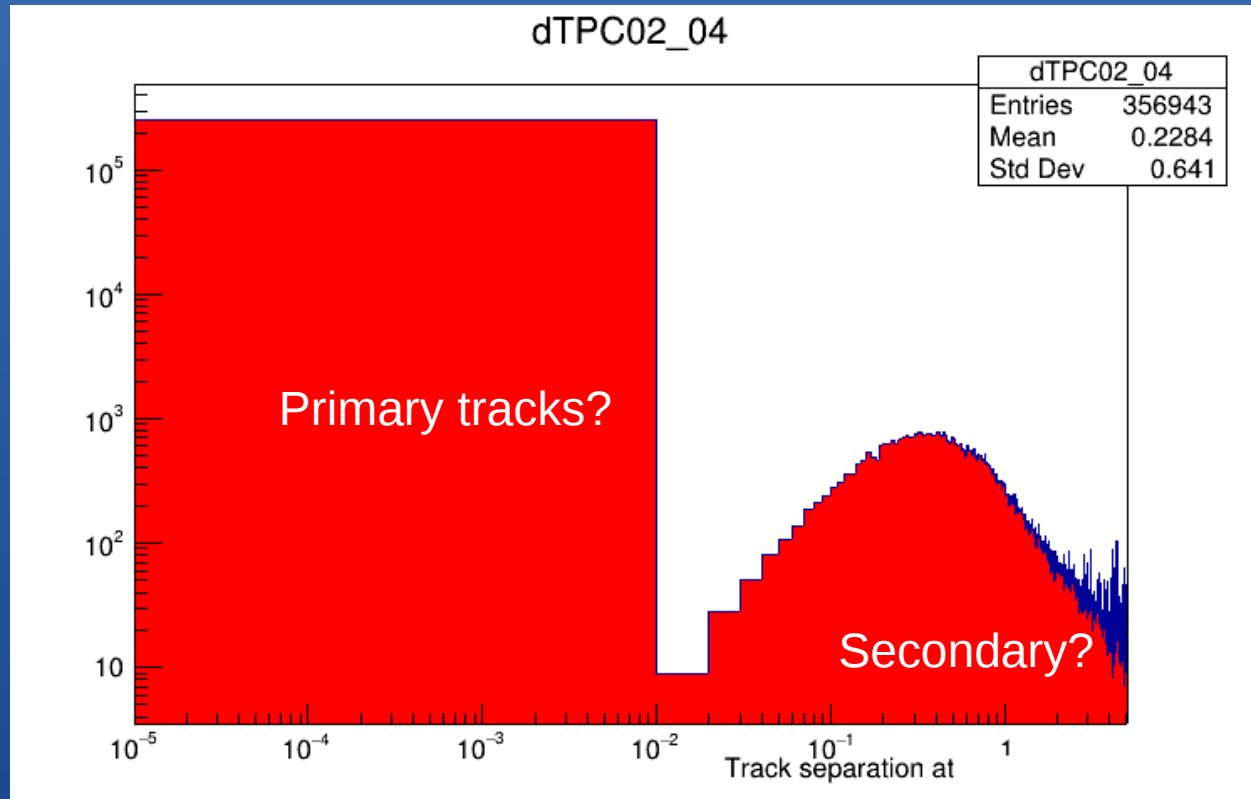
Track DCA

GetFirstPiont – DCA



Pair track DCA

```
TVector3 pac[5000];  
pac[npartgood].SetXYZ(  
track->GetFirstPointX(),  
track->GetFirstPointY(),  
track->GetFirstPointZ());  
  
Fill((pac[i]-pac[j]).Mag());
```

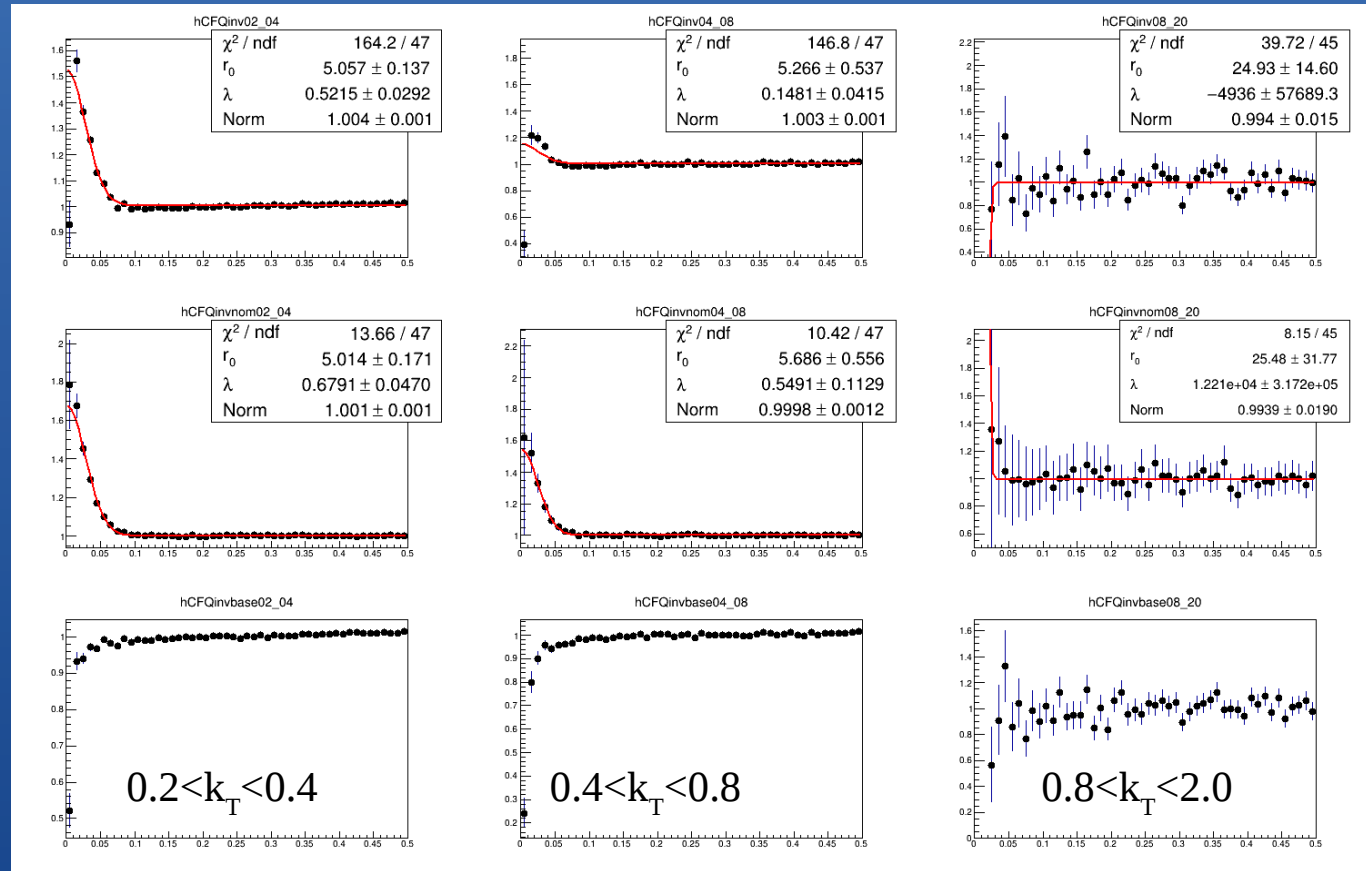


Reconstructed CF

Merging in rec CF

Pure weight (QS $r_0=3\sqrt{2}$ fm ?)

Merging in rec CF w/o weight



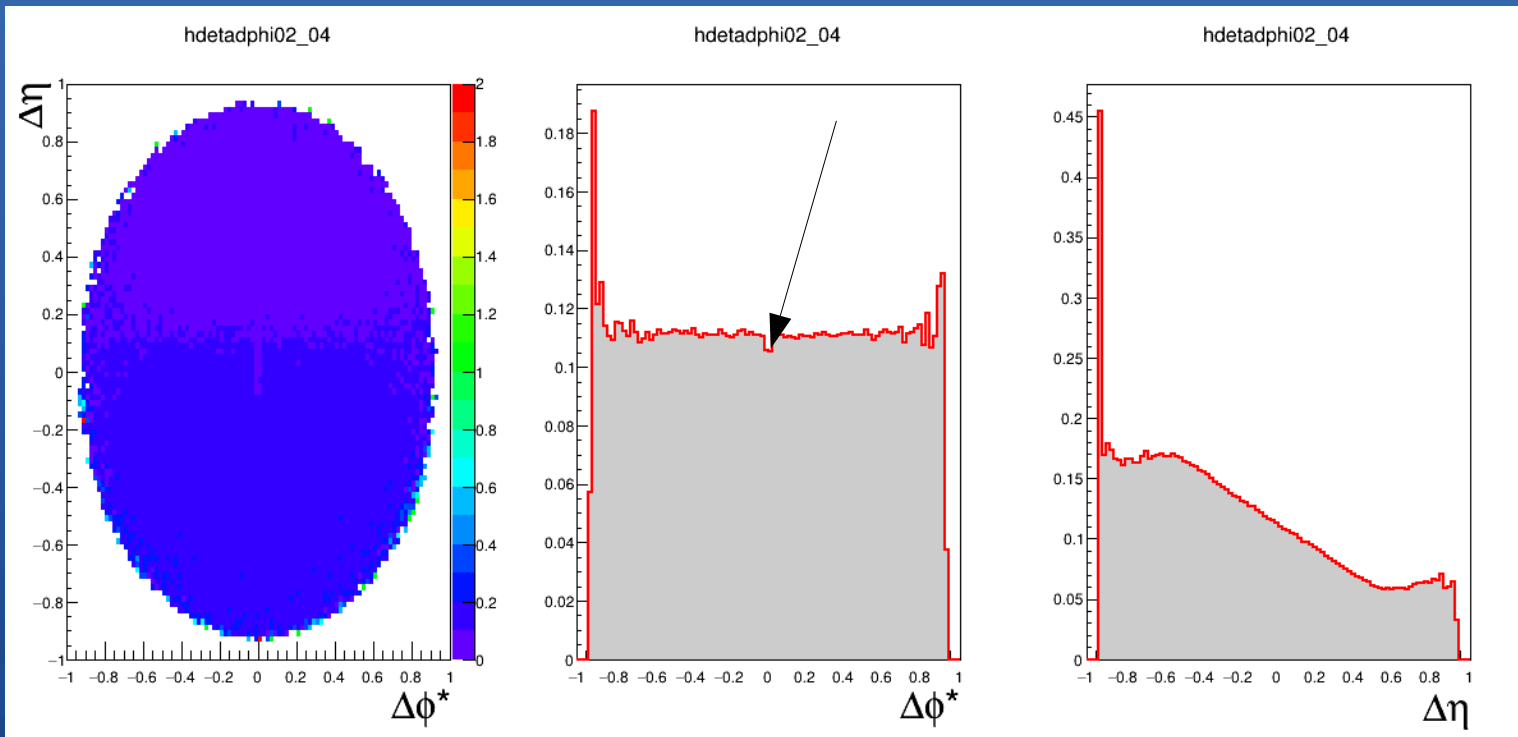
$\Delta\eta - \Delta\phi^*$ cut (ALICE)

- To obtain the actual angular distance of two tracks in the transverse plane at a given cylindrical radius R the bending inside the magnetic field has to be taken into account.

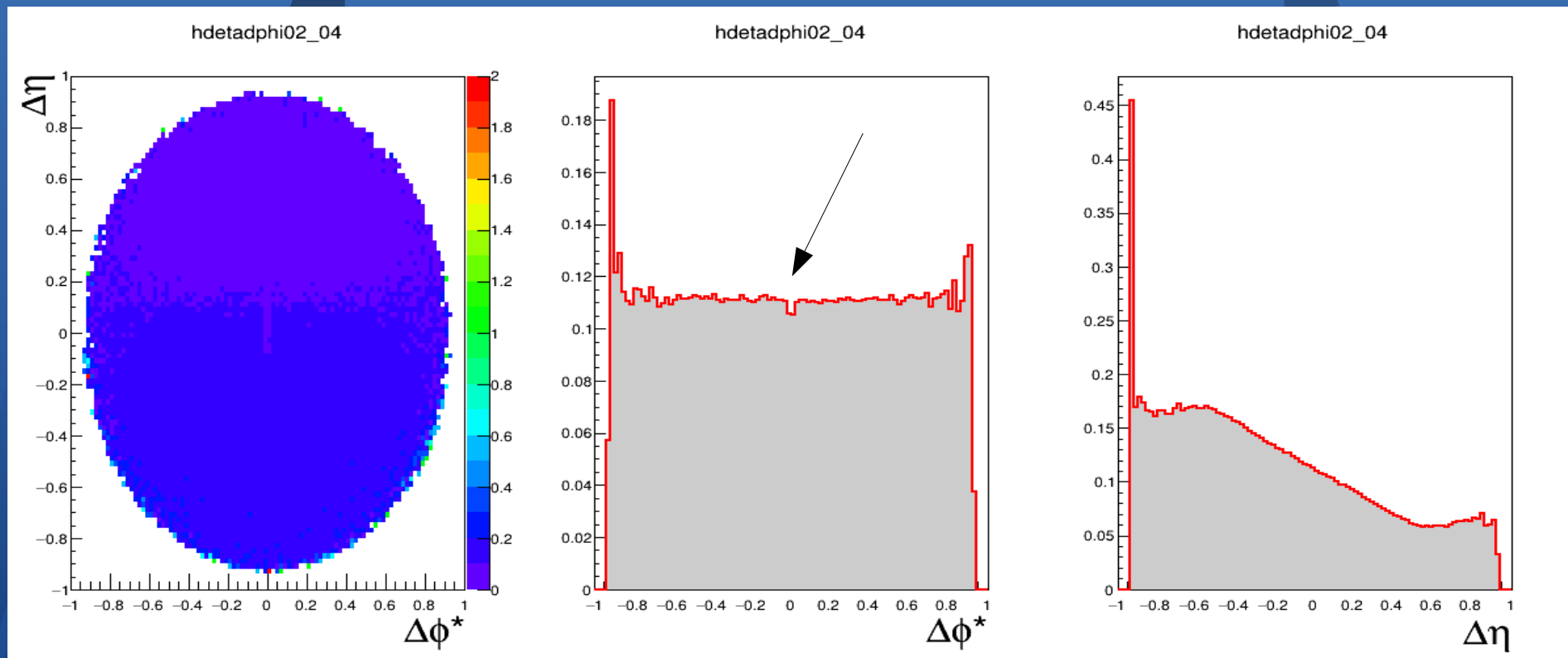
$$\Delta\phi^* = \phi_1 - \phi_2 + \arcsin\left(\frac{z \cdot e \cdot B_z \cdot R}{2p_{T1}}\right) - \arcsin\left(\frac{z \cdot e \cdot B_z \cdot R}{2p_{T2}}\right)$$

- ϕ_1 and ϕ_2 are the azimuthal angles of the tracks at the vertex, p_{T1} and p_{T2} are their transverse momenta. e stands for the elementary charge and is -0.3 in Heaviside-Lorentz units. B_z indicates the magnetic field in z direction.

$0.2 < kT < 0.4 \text{ GeV}/c$



$0.4 < kT < 0.8 \text{ GeV}/c$



News from Anna

