Framework

- brief description of FairRoot
- Listing external software tools being used (Geant, root etc.)
- brief description of panda-only tools

Silicon Detector Software (SDS)

- Structure
- MVD Implementation
- MC Transport
- Digitization: strips & pixels
- Digitization: Electronics modeling (to be supported by Jülich people)
- Digitization: Noise treatment
- Reconstruction: Cluster finding & Hit calculation

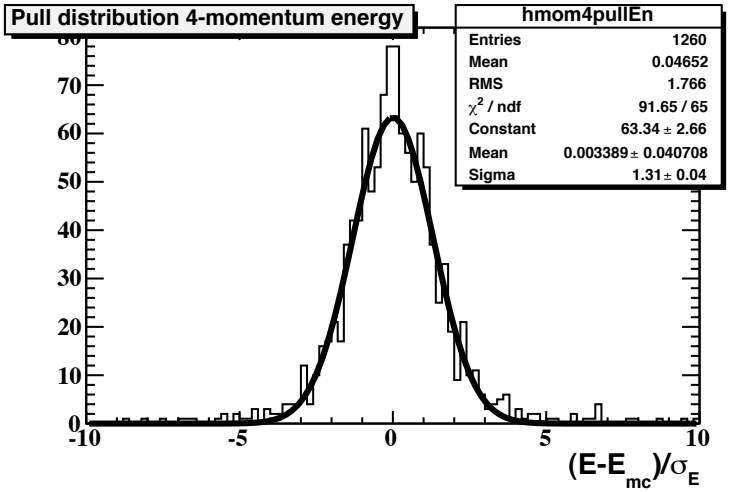
Vertexing

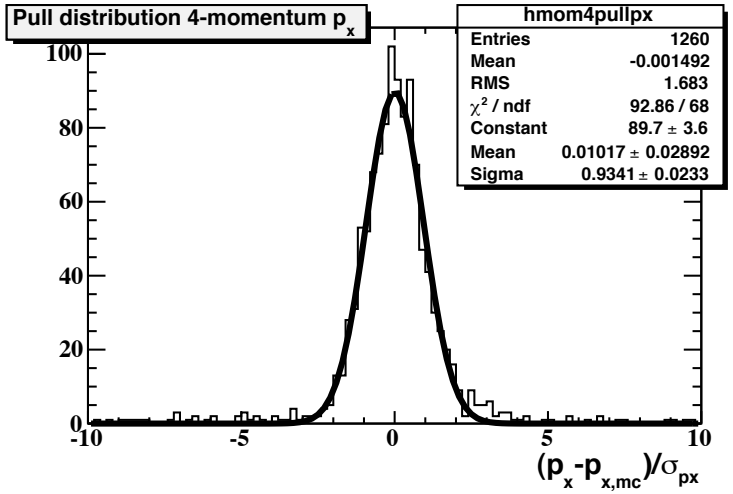
POCA

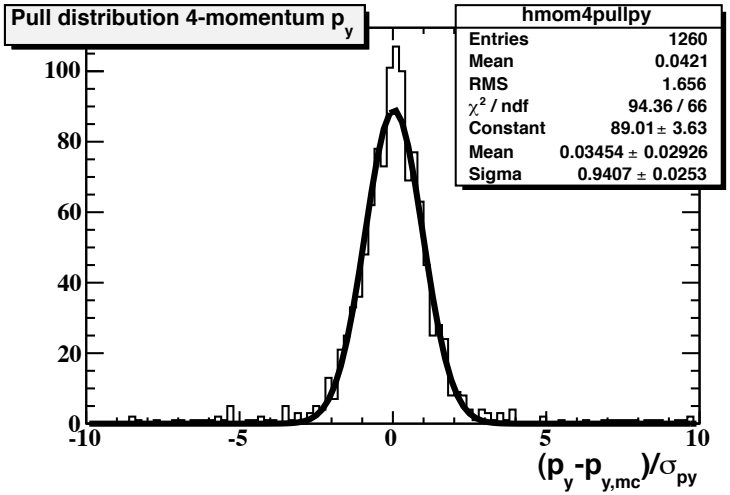
- Point of closest Approach

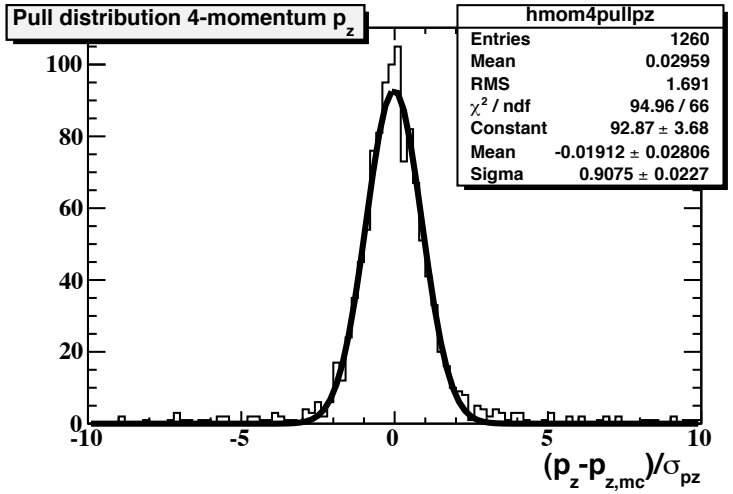
PRG

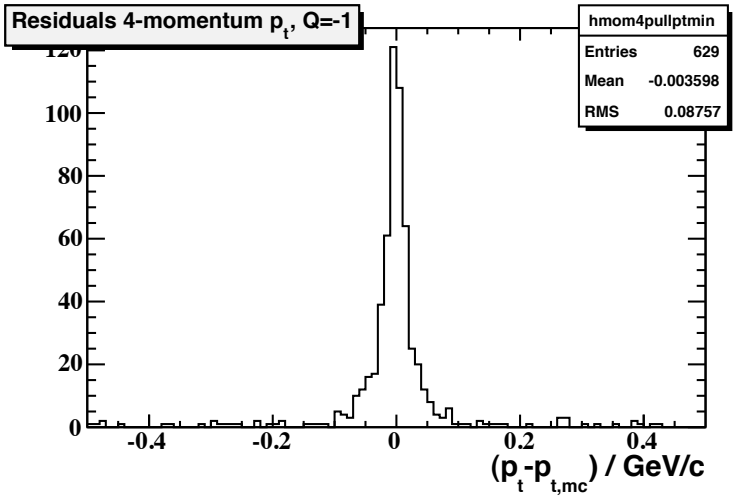
- Linearized fitter (Billoir/Qian)
- under develoment

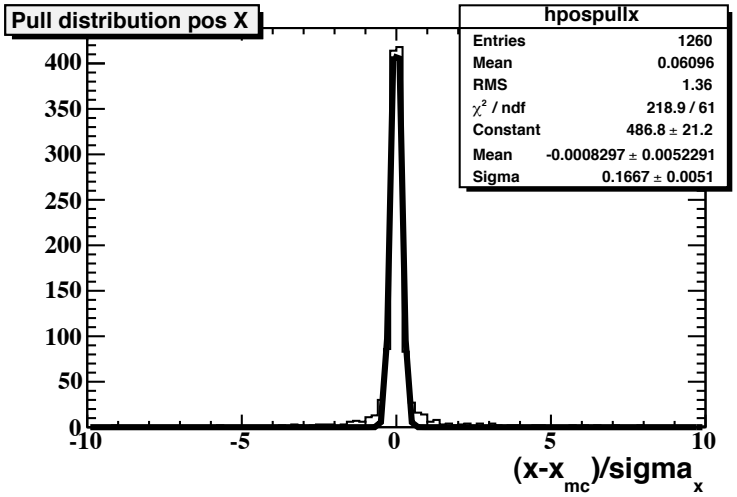

Pull distribution 4-momentum energy
hmom4pullEn
Entries 1260
Mean 0.04652
RMS 1.766
χ² / ndf 91.65 / 65
Constant 63.34 ± 2.66
Mean 0.003389 ± 0.040708
Sigma 1.31 ± 0.04
(E-E_mc)/σ_E

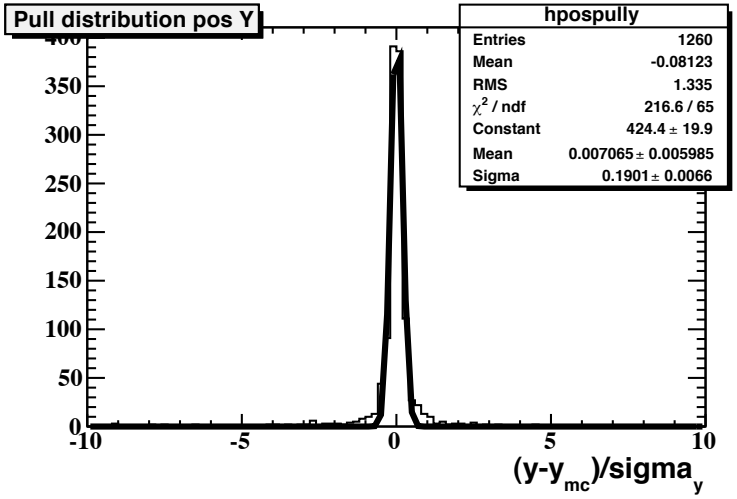

Pull distribution 4-momentum p_x
hmom4pullpx
Entries 1260
Mean -0.001492
RMS 1.683
χ² / ndf 92.86 / 68
Constant 89.7 ± 3.6
Mean 0.01017 ± 0.02892
Sigma 0.9341 ± 0.0233
(p_x-p_x,mc)/σ_px

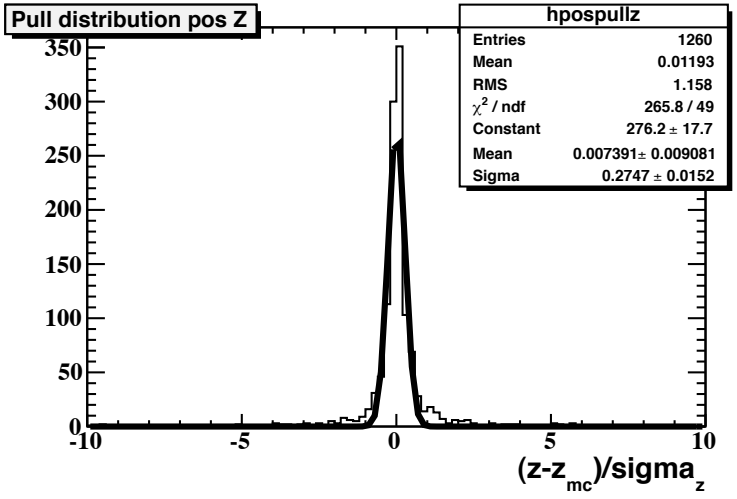

Pull distribution 4-momentum p_y
hmom4pullpy
Entries 1260
Mean 0.0421
RMS 1.656
χ² / ndf 94.36 / 66
Constant 89.01 ± 3.63
Mean 0.03454 ± 0.02926
Sigma 0.9407 ± 0.0253
(p_y-p_y,mc)/σ_py


Pull distribution 4-momentum p_z
hmom4pullpz
Entries 1260
Mean 0.02959
RMS 1.691
χ² / ndf 94.96 / 66
Constant 92.87 ± 3.68
Mean -0.01912 ± 0.02806
Sigma 0.9075 ± 0.0227
(p_z-p_z,mc)/σ_pz

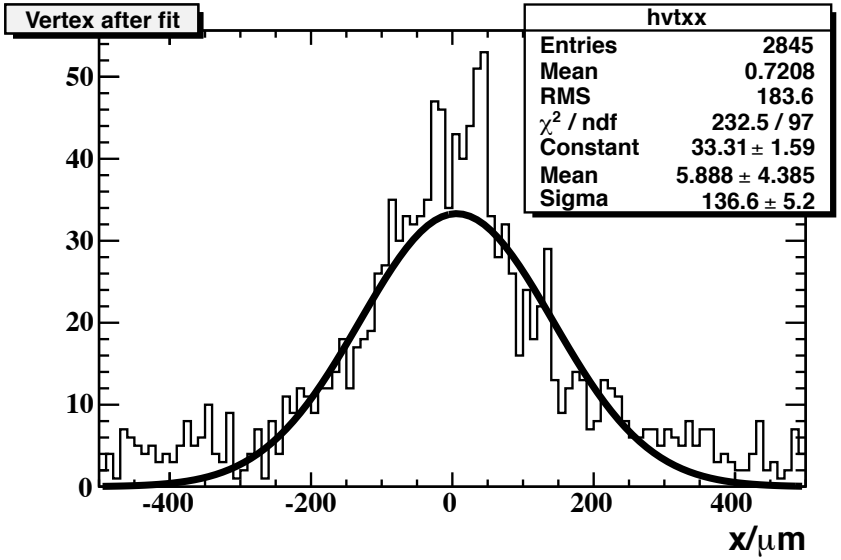

Residuals 4-momentum p_t, Q=-1
hmom4pullptmin
Entries 629
Mean -0.003598
RMS 0.08757
$(p_t - p_{t,mc})$ / GeV/c

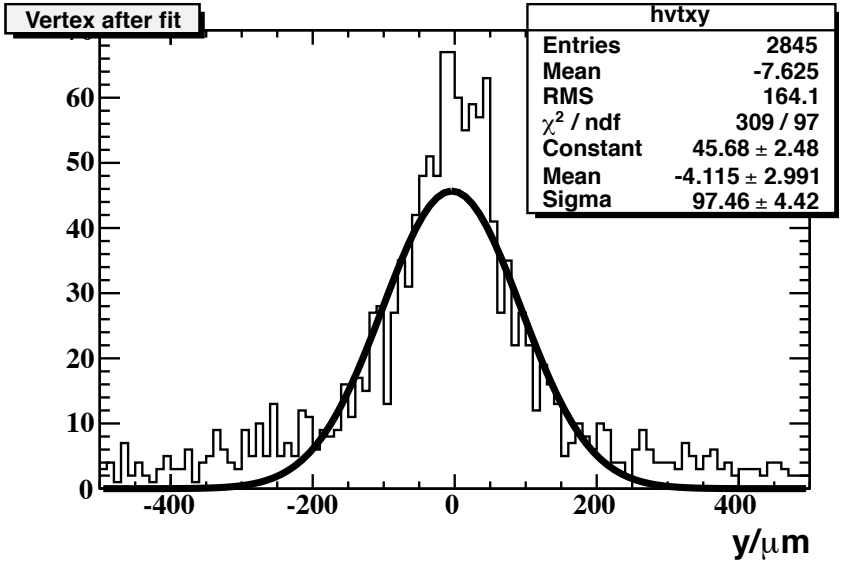

Pull distribution pos X
hpospullx
Entries 1260
Mean 0.06096
RMS 1.36
χ^2 / ndf 218.9 / 61
Constant 486.8 ± 21.2
Mean -0.0008297 ± 0.0052291
Sigma 0.1667 ± 0.0051
$(x-x_{mc})/sigma_x$

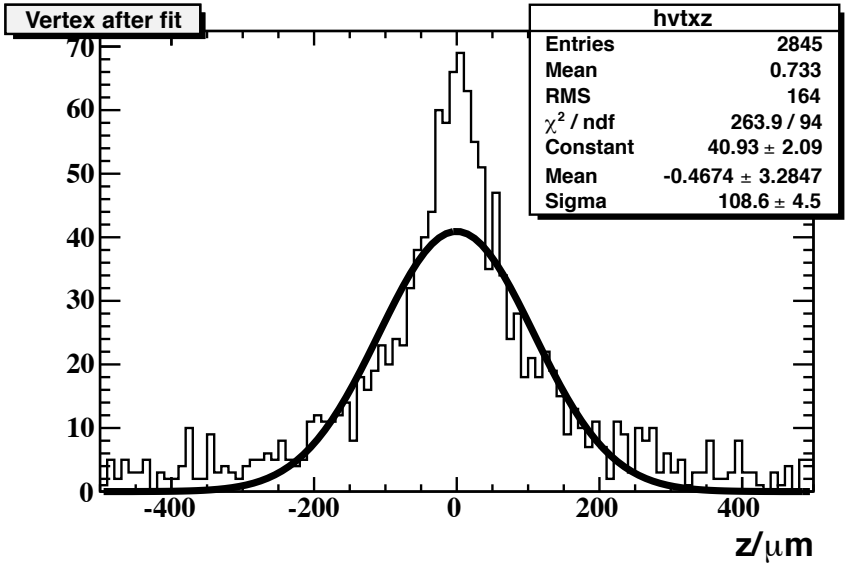

Pull distribution pos Y
hpospully
Entries 1260
Mean -0.08123
RMS 1.335
χ^2 / ndf 216.6 / 65
Constant 424.4 ± 19.9
Mean 0.007065 ± 0.005985
Sigma 0.1901 ± 0.0066
$(y-y_{mc})/sigma_y$


Pull distribution pos Z
hpospullz
Entries 1260
Mean 0.01193
RMS 1.158
χ^2 / ndf 265.8 / 49
Constant 276.2 ± 17.7
Mean 0.007391 ± 0.009081
Sigma 0.2747 ± 0.0152
$(z-z_{mc})/sigma_z$

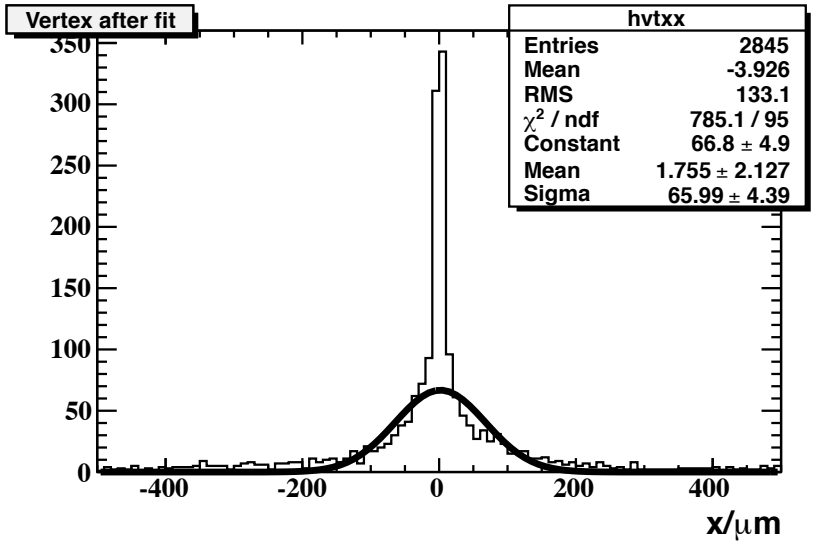
Fast vertex finder "POCA"

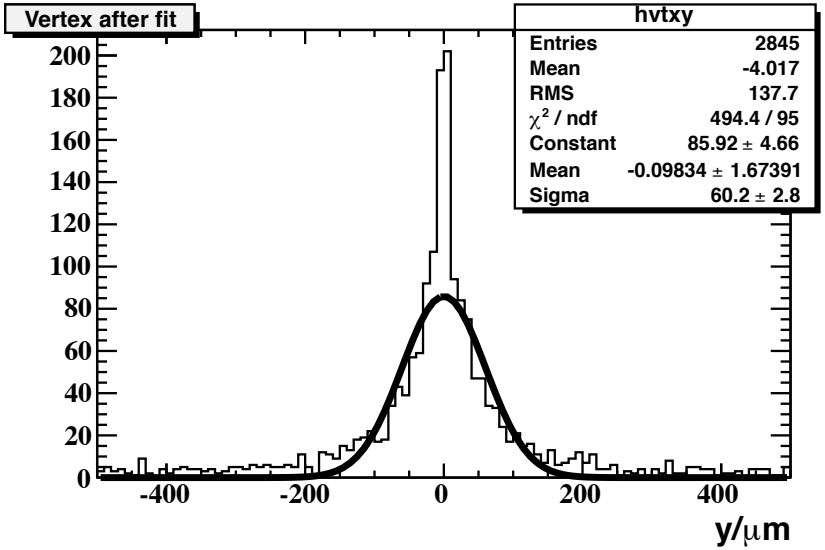


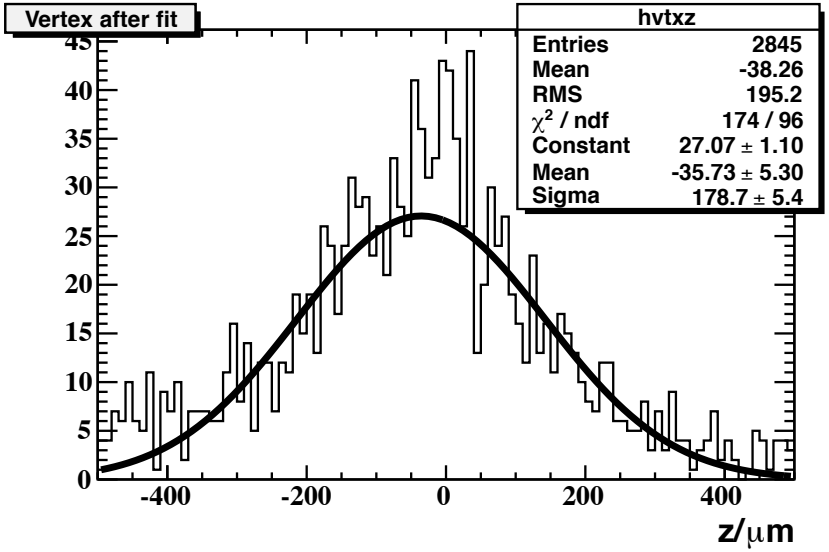




Fast vertex finder "PRG"







Simulations to enter the TDR

Digi/Reco Simulations

→ Showing functionality, residuals etc.

Benchmark Channels

→ Simone Bianco will tell you

Energy loss & PID capability

→ Laura Zotti will tell you ?

Real Data reconstruction

→ Who will cover sth.? E.g. from the Bonn Testsatation