Subject: Re: Vertex fitters' problems
Posted by L. Zotti on Fri, 21 Jun 2013 16:43:34 GMT
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Dear Ralf,
thanks for your helping.
Looking in your analysis macro, I found you just missed one "break" at line 273. Actually with this modification, I got some better results from the ChiVtx fitter.
Moreover, cleaning the sample looking at the FitStatus flag, I got the following resolution:

PndChiVtxFitter x:32um y:52um z:138
PndVtxPRG (full) x:61um y:60um z:103um
PndVtxPRG (fast) x:60um y:61um z:103um

Plots for PndChiVtxFitter:

Plots for PndKinVtxFitter:

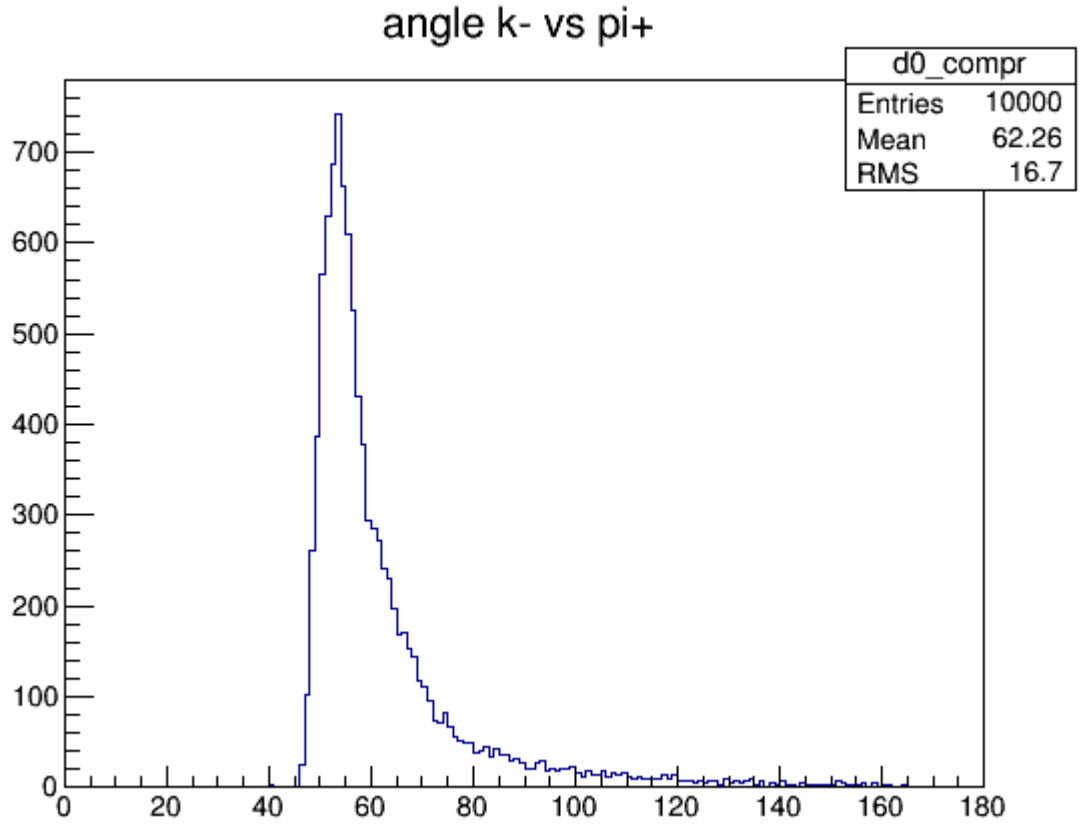
Plots for PndVtxPoca

Plots for PndVtxPRG
1)fast:
2)full:

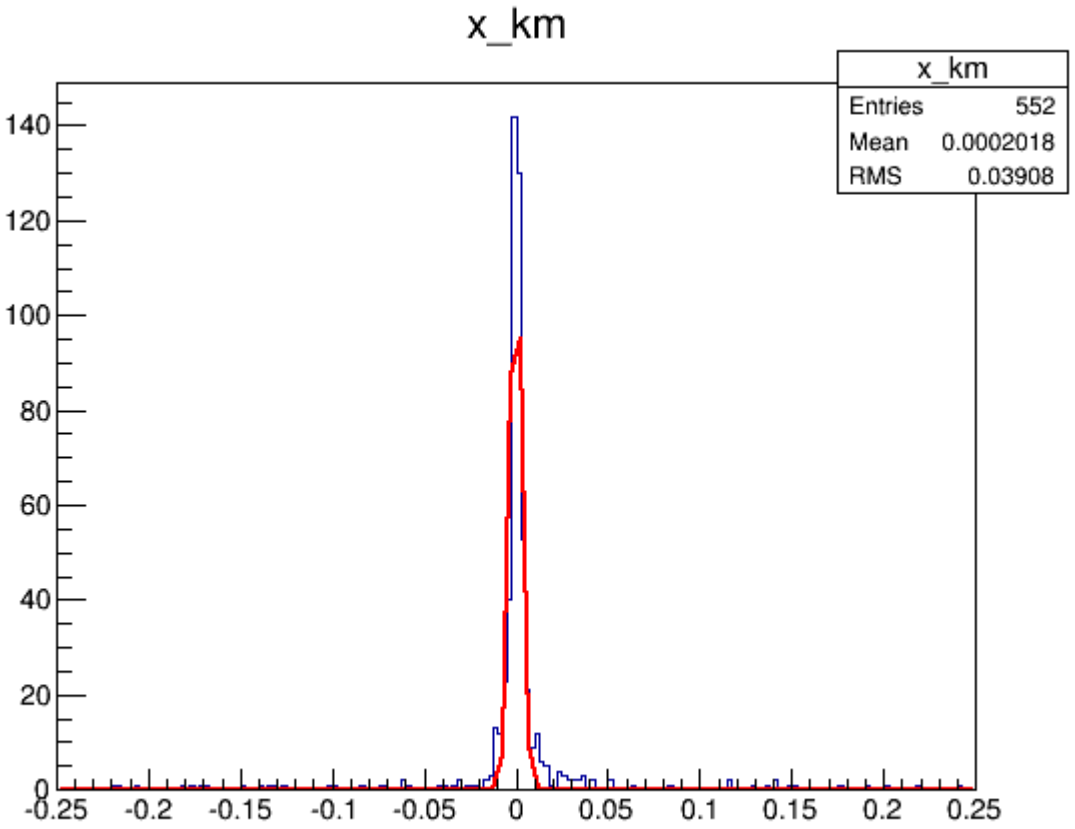
Still to be understood why resolution are different in x and y for the PndChiVtxFitter.
Do you think this results are reliables?
The KinVtxFitter and the Poca one still give strange results.
For what concern the kinematics, actually the kaons and the pions from the d0-meson are well separated in angle, how you can see here:

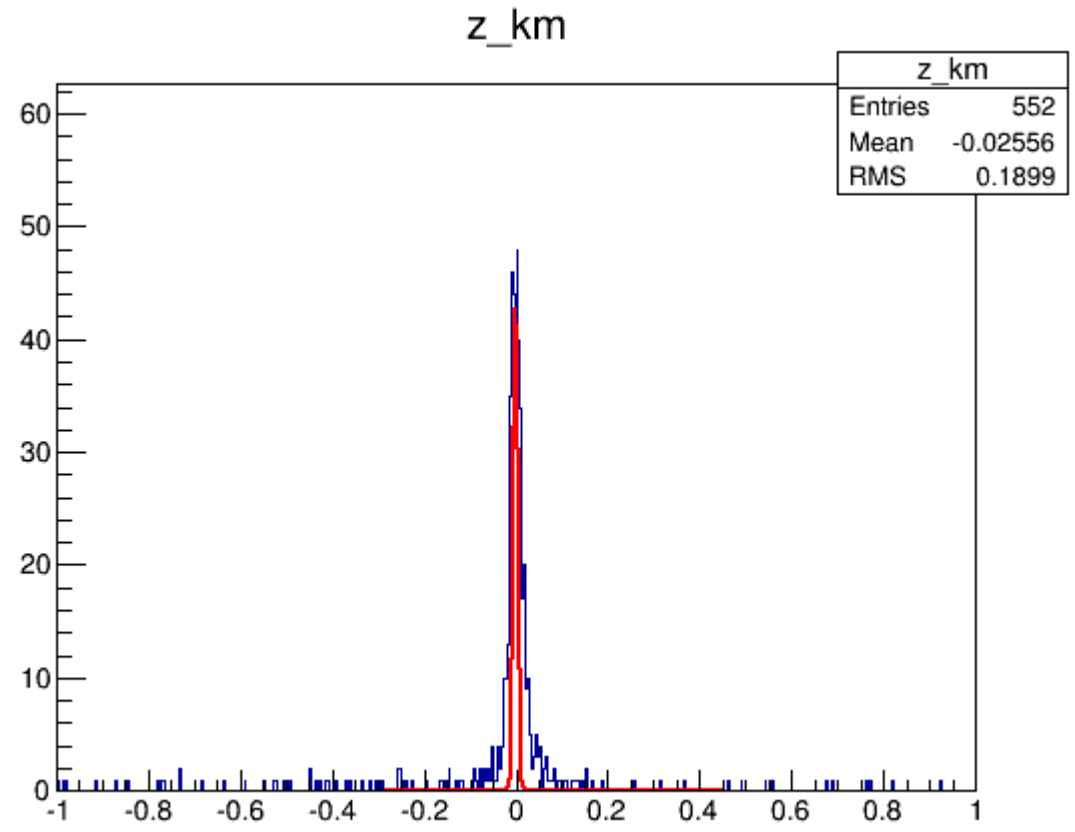
File Attachments

1) opening_angle.png, downloaded 1415 times

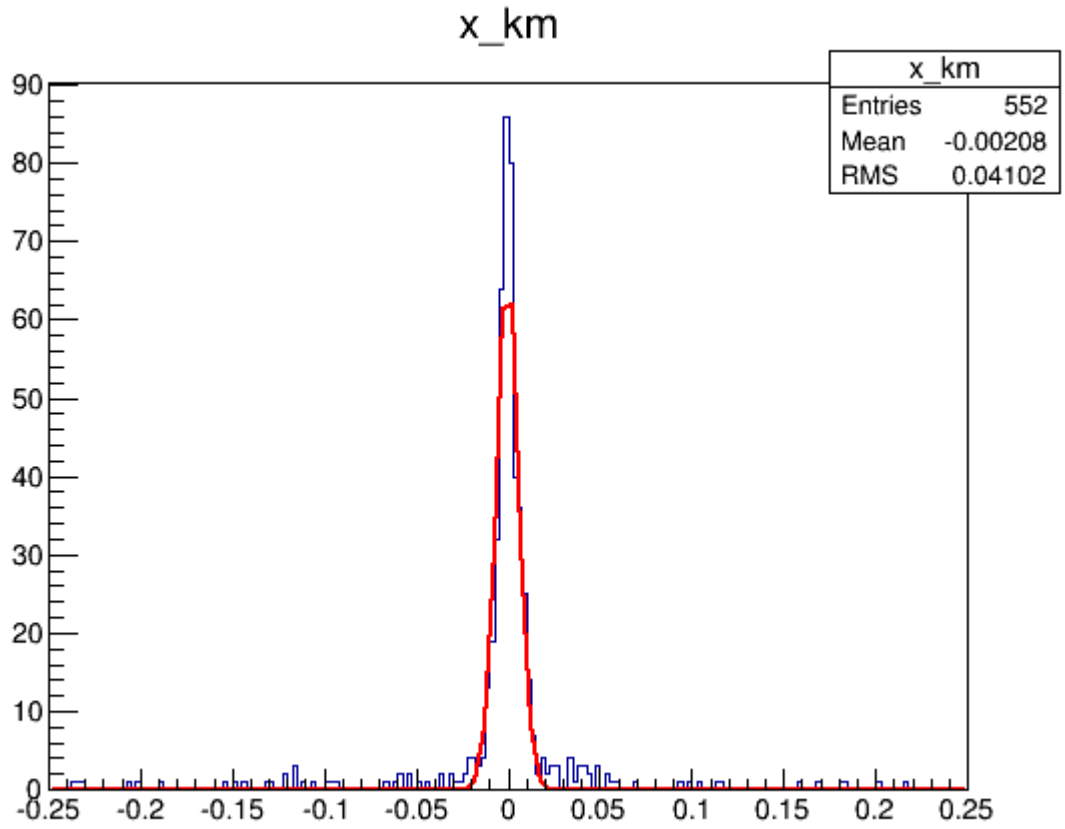


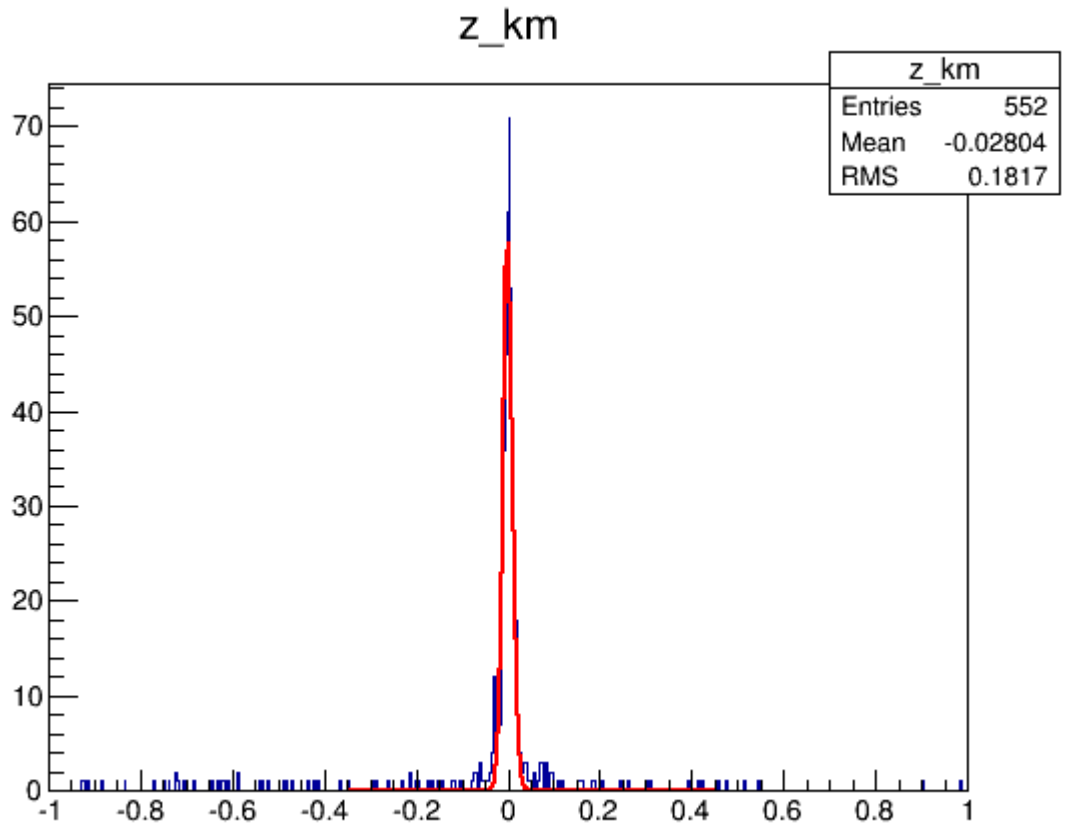
2) ChiVtx.png, downloaded 1468 times



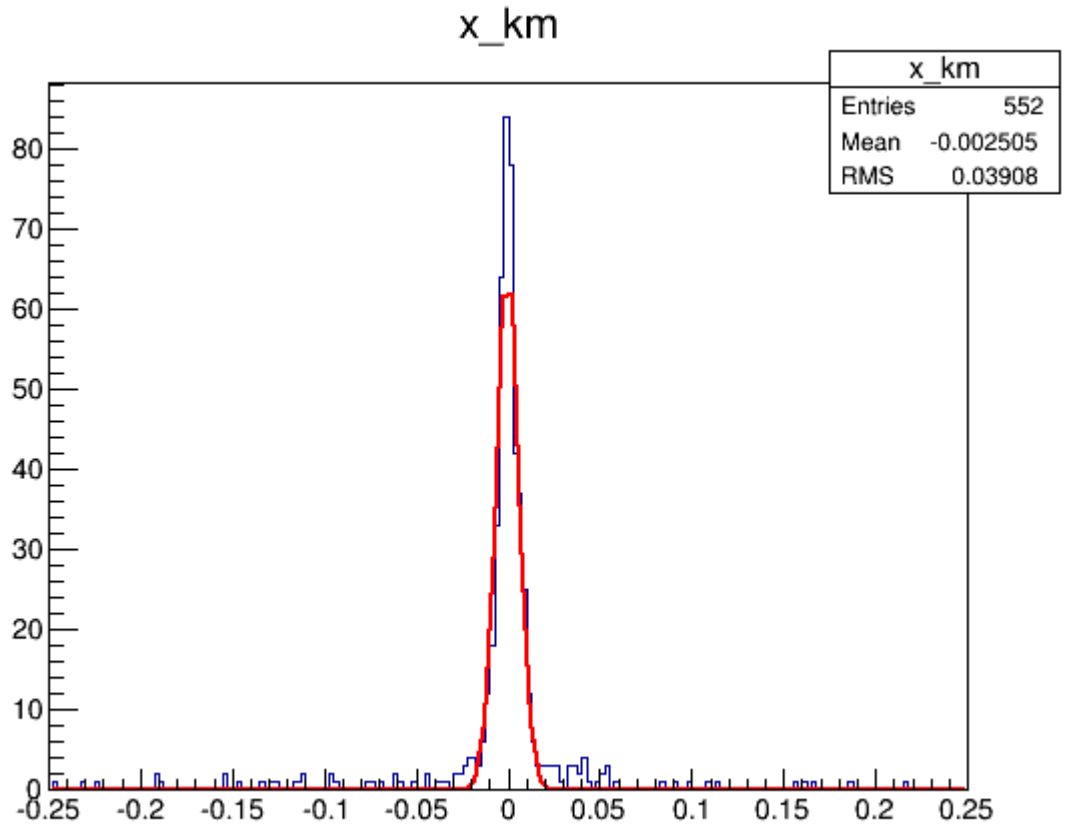


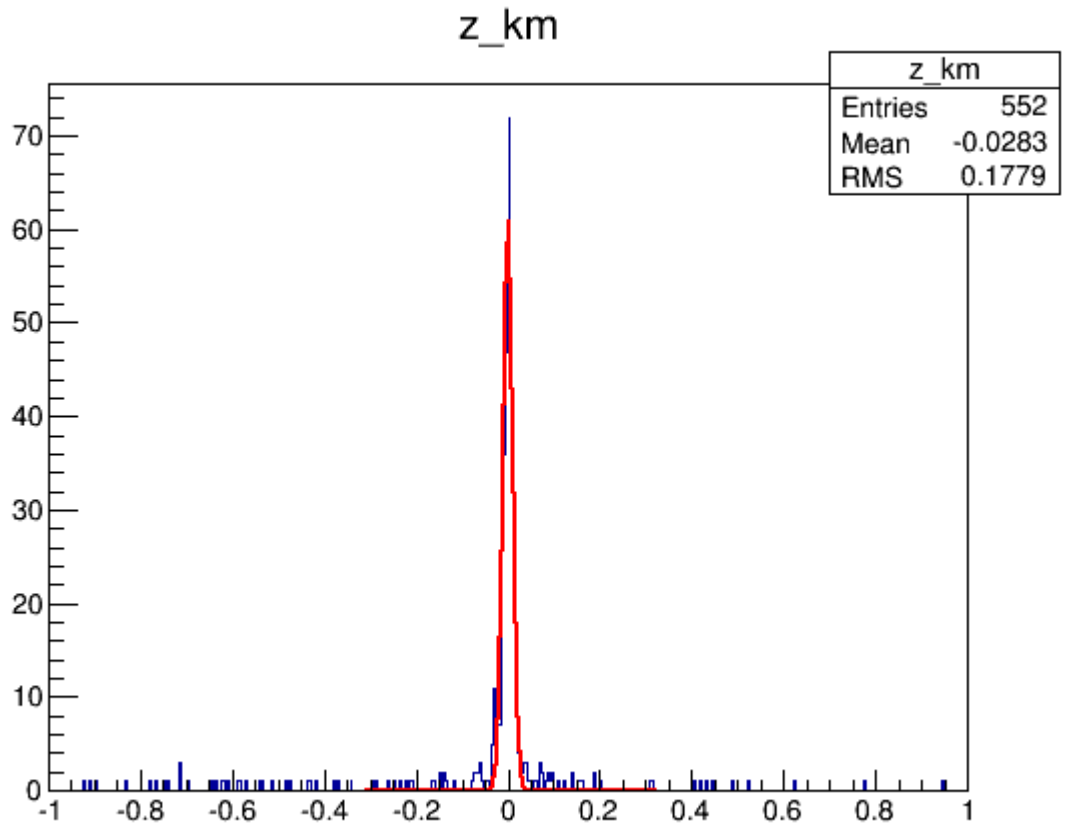
3) FastVtx.png, downloaded 1417 times



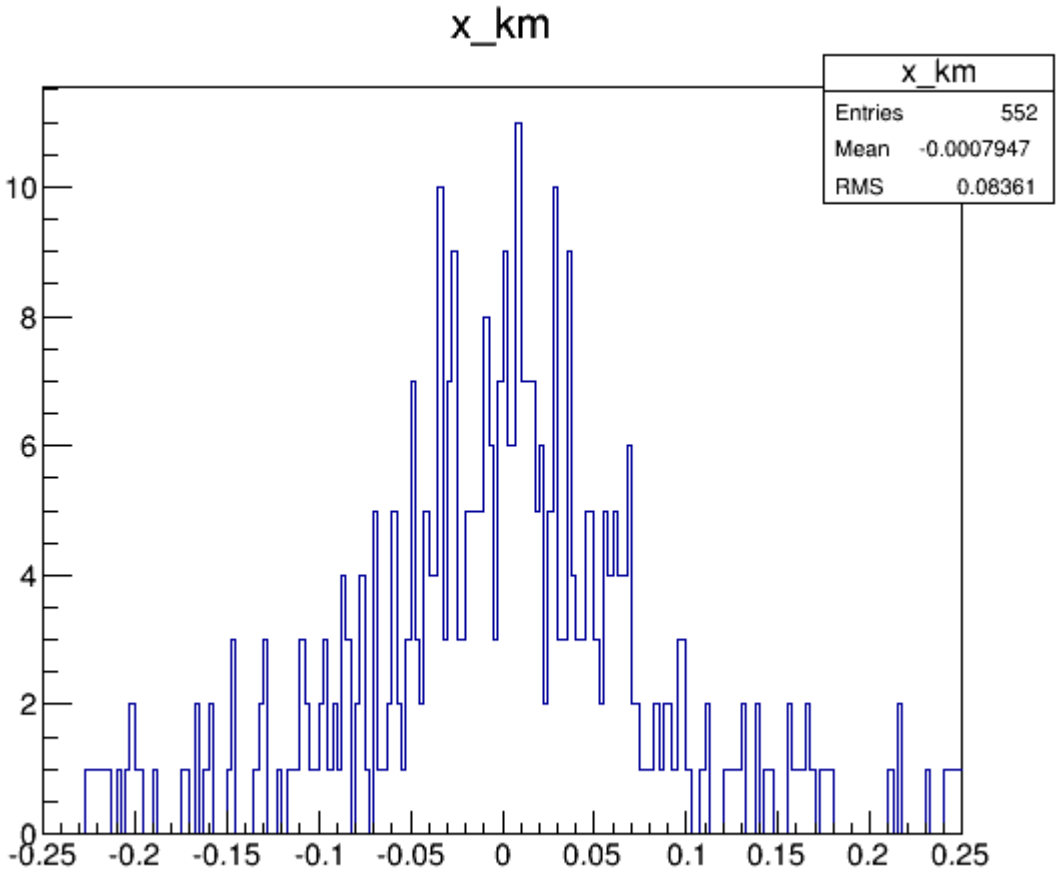


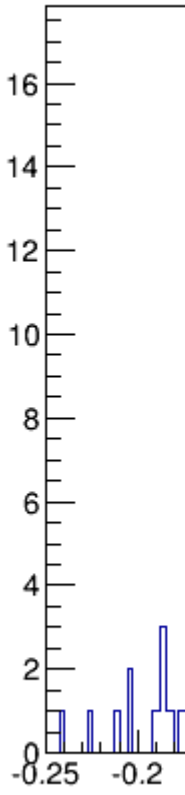
4) FullVtx.png, downloaded 1459 times

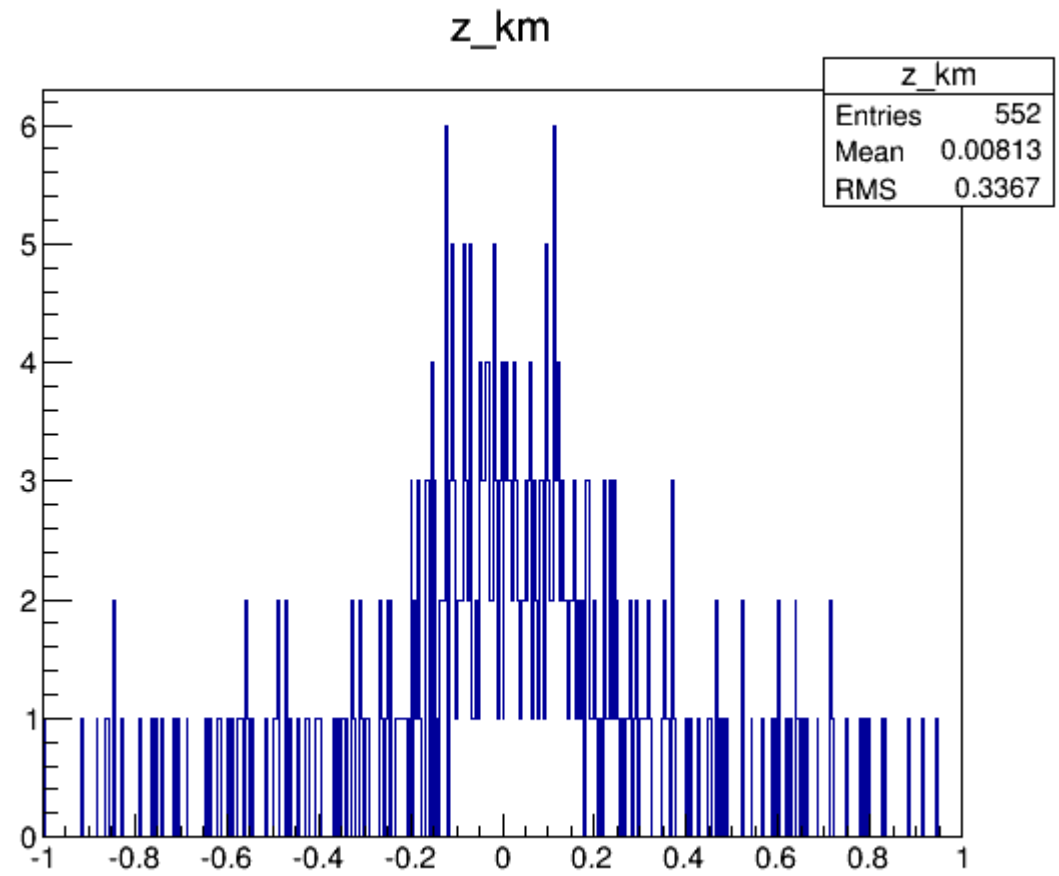


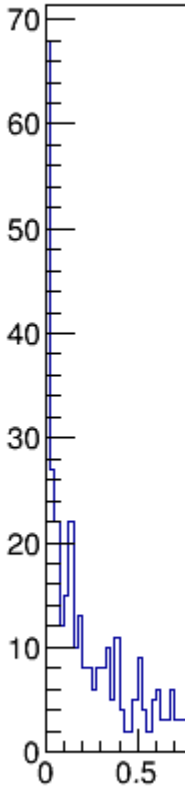


5) KinVtx.png, downloaded 1315 times

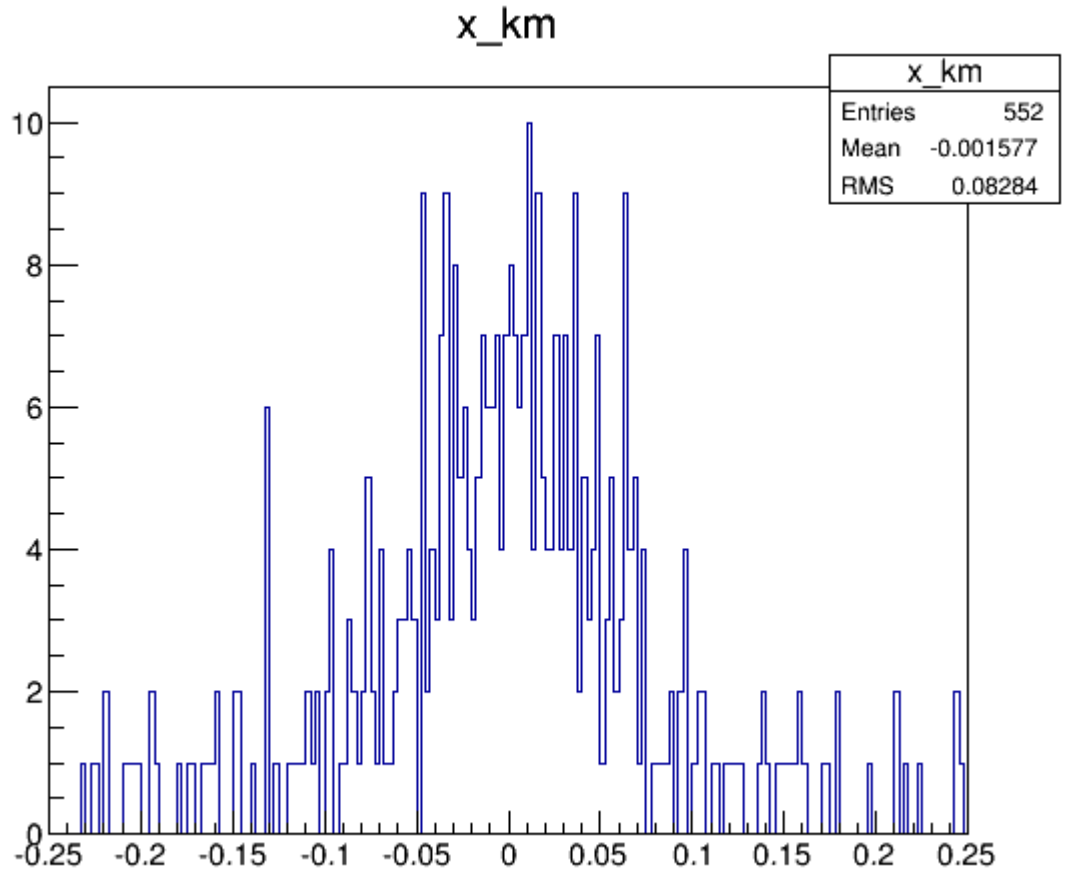

x_km
x_km
Entries 552
Mean -0.0007947
RMS 0.08361
10
8
6
4
2
0
-0.25
-0.2
-0.15
-0.1
-0.05
0
0.05
0.1
0.15
0.2
0.25

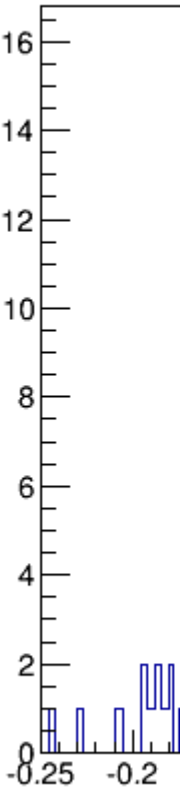

16
14
12
10
8
6
4
2
0
-0.25
-0.2

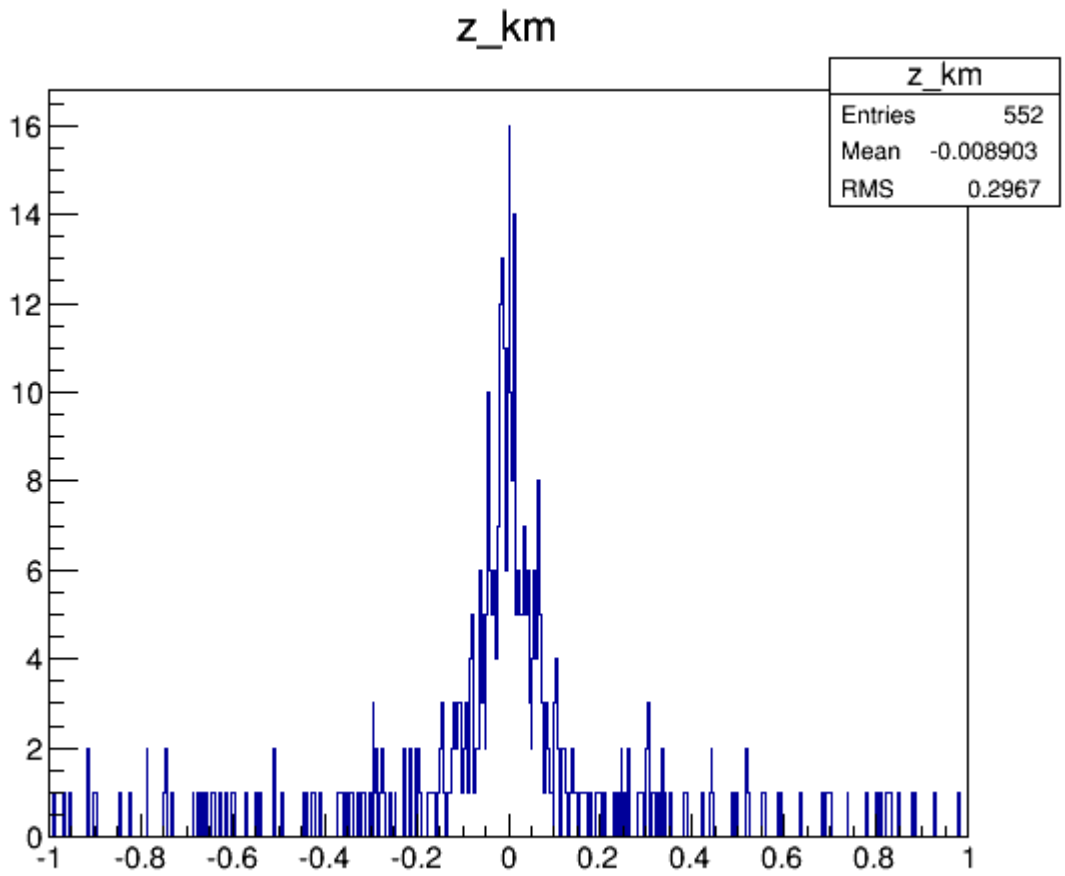

z_km
z_km
Entries 552
Mean 0.00813
RMS 0.3367
6
5
4
3
2
1
0
-1
-0.8
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
0.8
1

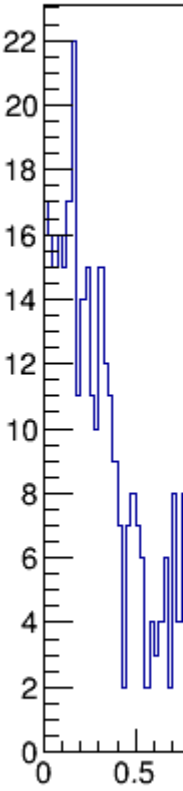

70
60
50
40
30
20
10
0
0
0.5

6) PocaVtx.png, downloaded 1414 times


x_km
x_km
Entries 552
Mean -0.001577
RMS 0.08284
10
8
6
4
2
0
-0.25
-0.2
-0.15
-0.1
-0.05
0
0.05
0.1
0.15
0.2
0.25


16
14
12
10
8
6
4
2
0
-0.25
-0.2


z_km
z_km
Entries 552
Mean -0.008903
RMS 0.2967
16
14
12
10
8
6
4
2
0
-1
-0.8
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
0.8
1


22
20
18
16
14
12
10
8
6
4
2
0
0
0.5