Subject: Bug in cluster angles
Posted by StefanoSpataro on Fri, 22 Jun 2007 12:49:11 GMT
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Hello,
as already mentioned some meeting ago there is a bug in the calculation of cluster angles, coming from the shift of 37 mm of the barrel EMC.
Moreover, introducing the reflection instead of the rotation for the endcups, this introduced another bias even for phi.

Today I did some modifications on the Emc code and now (hopefully) the bugs should be far away...

Here you are some distributions for 2000 photons uniform in theta/phi/p[0,3][GeV/c]

theta(MC) - theta(EMC) vs theta(MC)

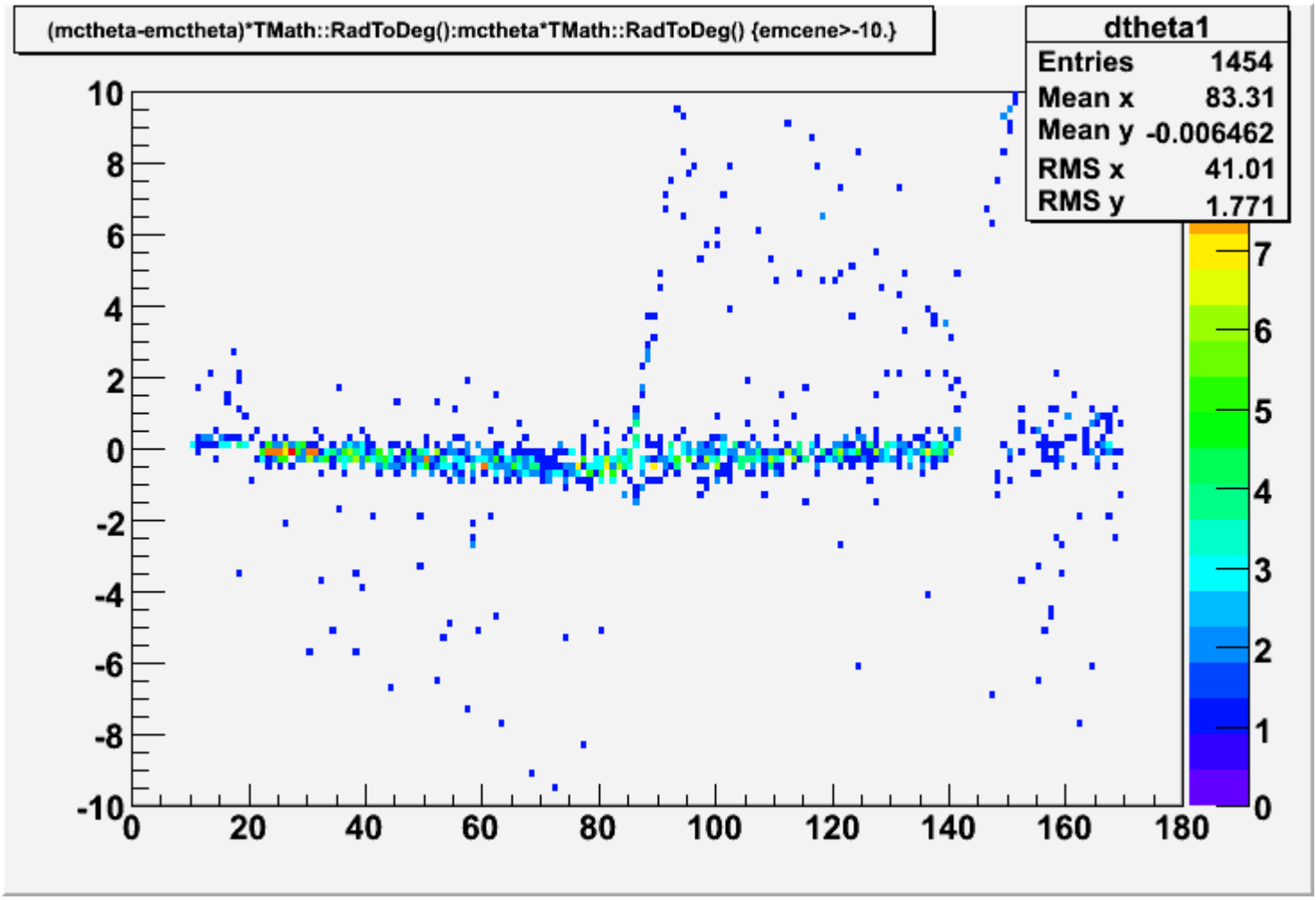
phiMC) - phi(EMC) vs phi(MC)

Hopefully now it should work.
I had no time to check the FSC part, which had the same problem. I hope it does work also, but further checks are needed.

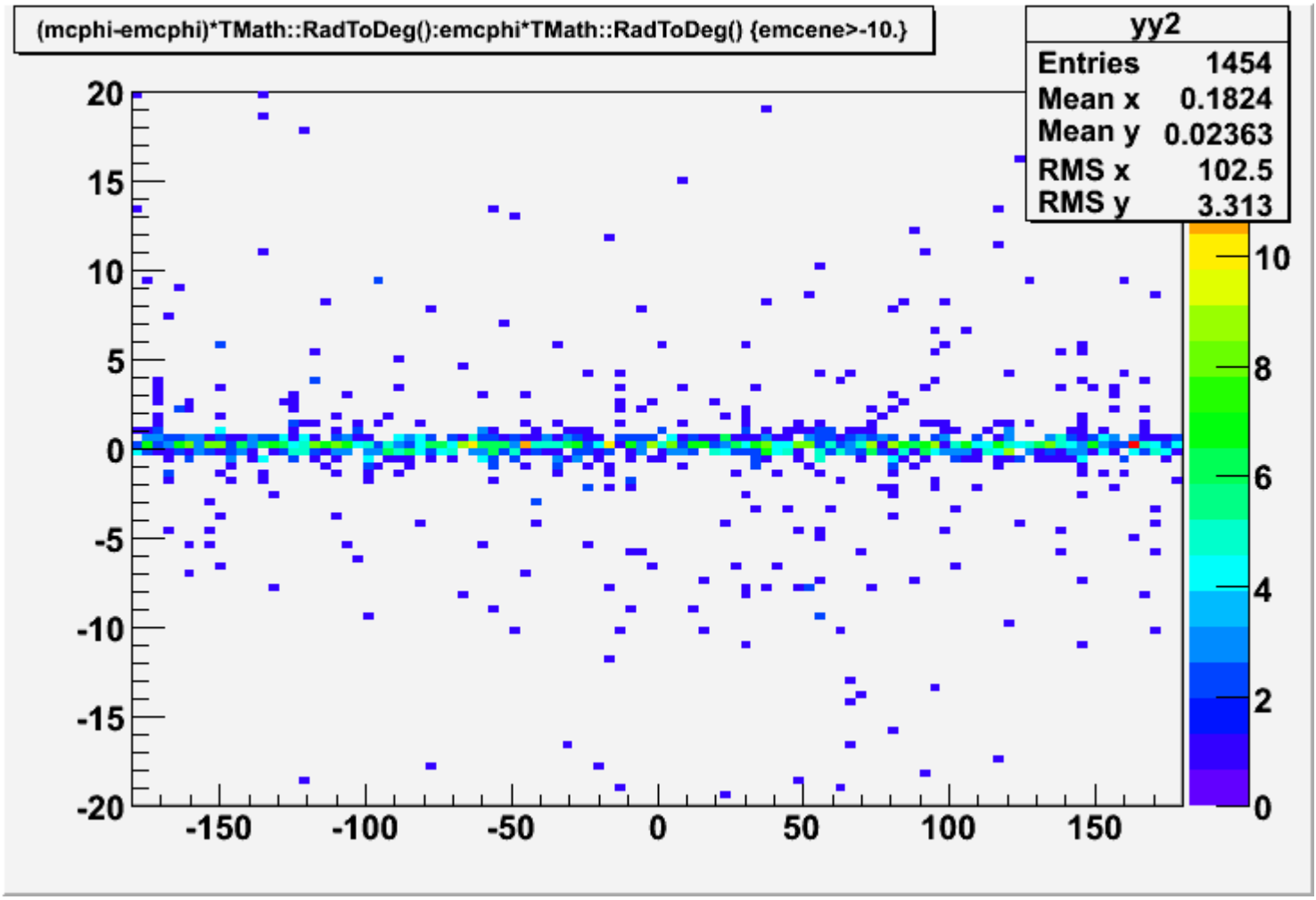
So, EMC people, please update your code. This is a temporary solution, before using the information from the TGeoManager

File Attachments

1) em_emc_dthetatheta_new.gif, downloaded 1612 times



2) em_emc_dphiphi_new.gif, downloaded 1527 times


(mcphi-emcphi)*TMath::RadToDeg():emcphi*TMath::RadToDeg() {emcene>-10.}
yy2
Entries 1454
Mean x 0.1824
Mean y 0.02363
RMS x 102.5
RMS y 3.313
20
15
10
5
0
-5
-10
-15
-20
-150
-100
-50
0
50
100
150
10
8
6
4
2
0