Subject: Re: forward endcap quest goes on
Posted by Aleksandra Biegun on Thu, 02 Jul 2009 13:57:11 GMT
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Hi Irina, hi All,

the problem Irina has had with the forward endcap
with GEANT 4 is fixed now.
Somehow, the single Reflection() I have made
for Quarter number 2 and 4 caused the problem with the Z shift.

So, I have changed the macro which creates the geometry
of the forward endcap (FwEndCap) and now it is called:
createRootGeoFileFwEnd_fixed.C.
It does not have Reftection() function.
It is committed to svn to:
../trunk/macros/emc/
and creates the root file with the same name like was before,
i.e. emc_module3new.root
(also commited to svn),
so you don't need to do any changes,
just do svn update.

I also had to change a little bit
../trunk/emc/EmcTools/PndEmcStructure.cxx.

I put the same plots made twice:
for GEANT 4 and, to compare, for GEANT 3.

At the plots:
z_ene_hits_digi_clusters_g[GEANT]_fwendcap_m3changed_fixed.png

you can see that Z-position for all 4 Quarters of the FwEndCap
is in the same Z for GEANT 4. For GEANT 3 it was fine before.

The mapping is also fine, should be the straight line
in each Quarter (each copy), what you can see at plots:
xpad_x_points_m3_g4_fixed.png - for X direction
ypad_y_points_m3_g4_fixed.png - for Y direction

Quarters of the FwEndCap are placed in the clockwise direction looking downstream.

Different parameters for Points, also Z-position of all 4 Qarters, are shown at plots:

points_g4_fwendcap_m3changed_fixed.png - for GEANT 4
points_g3_fwendcap_m3changed_fixed.png - for GEANT 3.

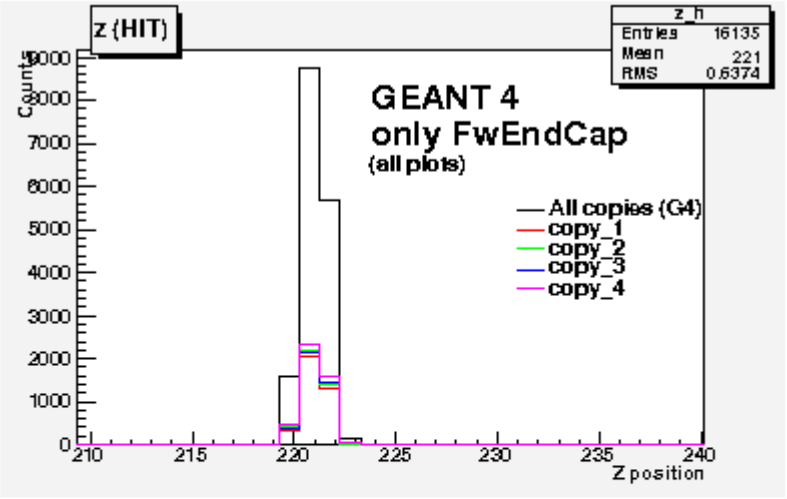
Irina, please check it.
I do hope there will not be any problem, but in case of any,
let me know.

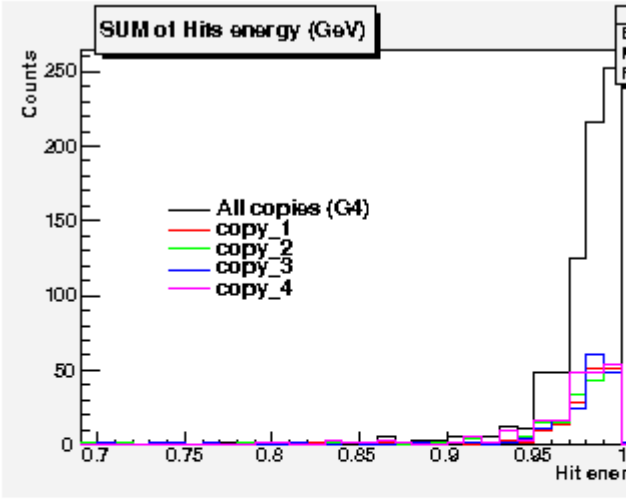
If you have any question, do not hesitate to ask.

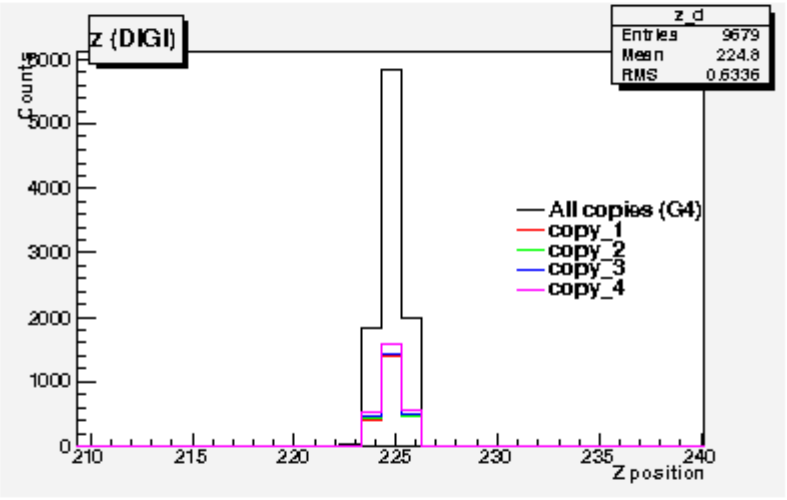
Best regards,
Ola.

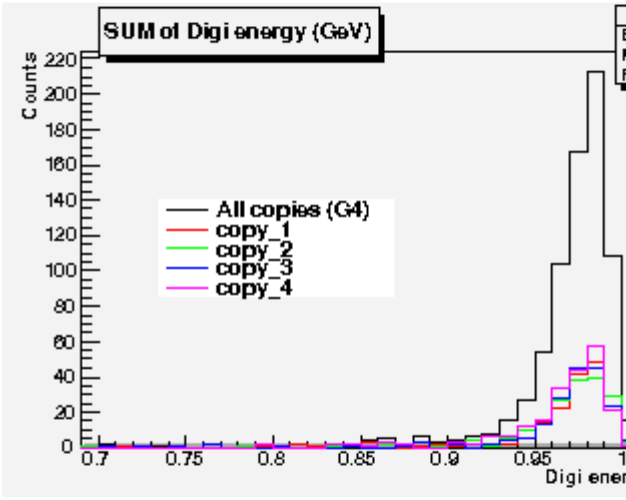
File Attachments

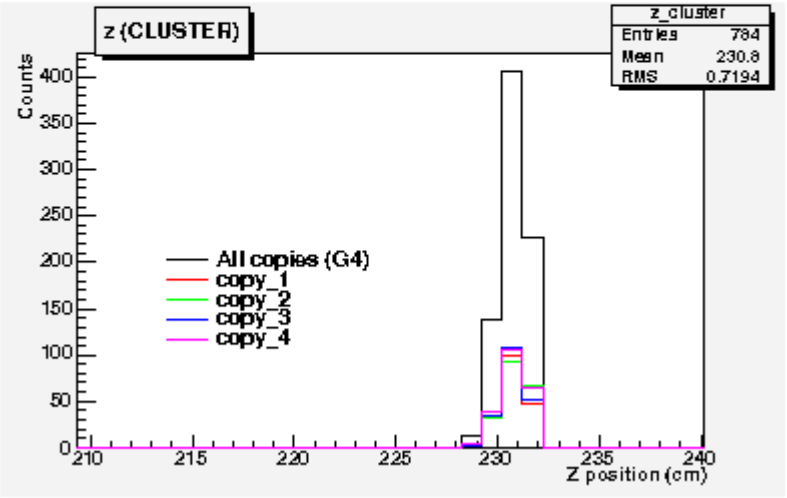
1) z_ene_hits_digi_clusters_g4_fwendcap_m3changed_fixed.png, downloaded 1123 times

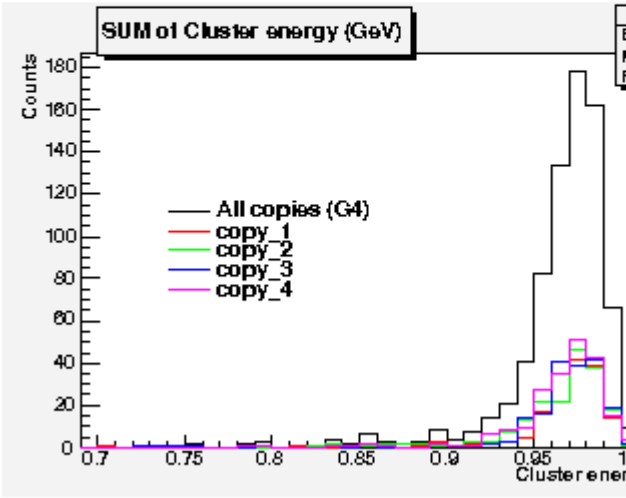




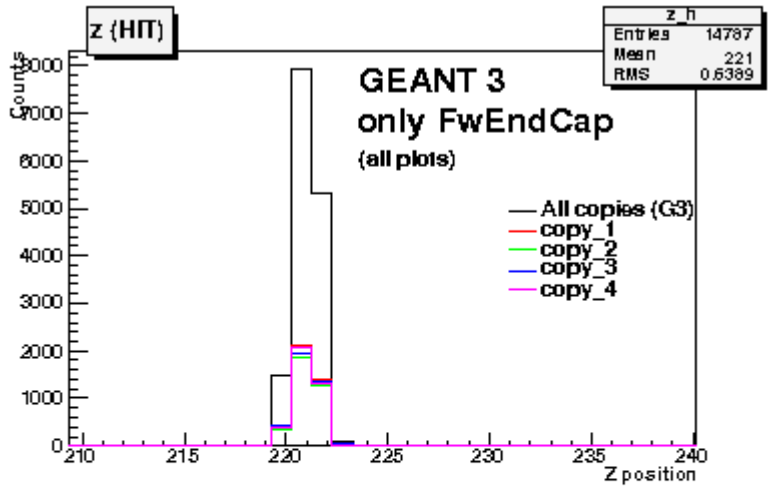


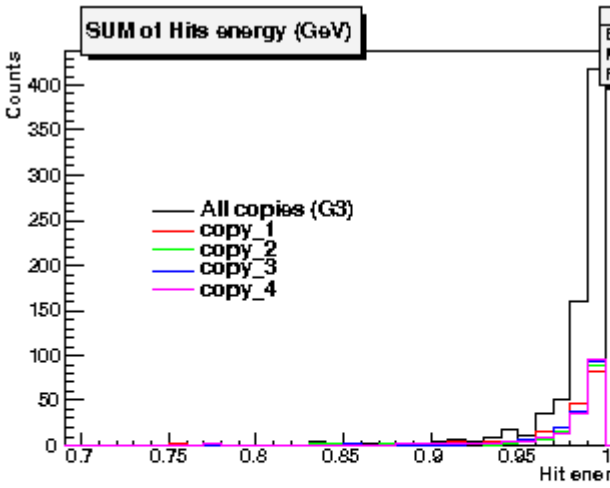


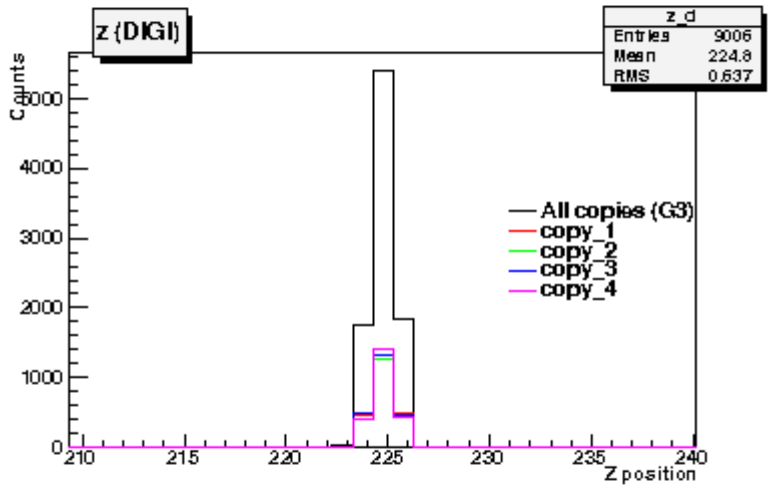


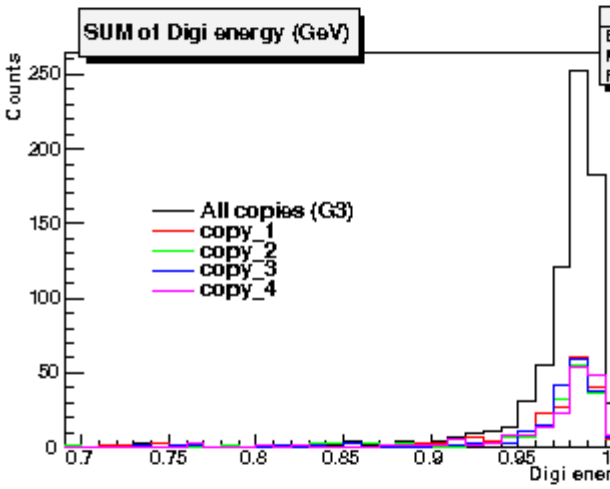


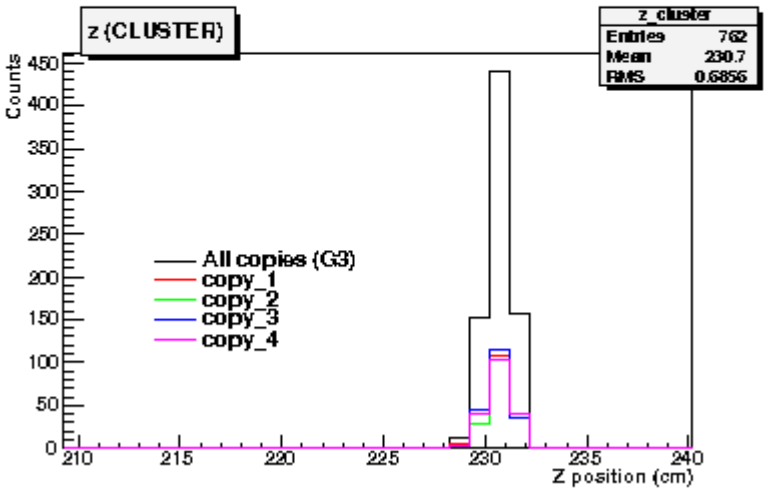
2) z_ene_hits_digi_clusters_g3_fwendcap_m3changed_fixed.png, downloaded 1179 times

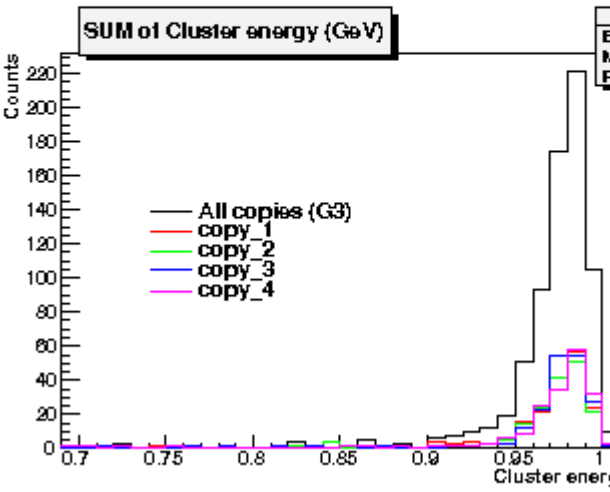




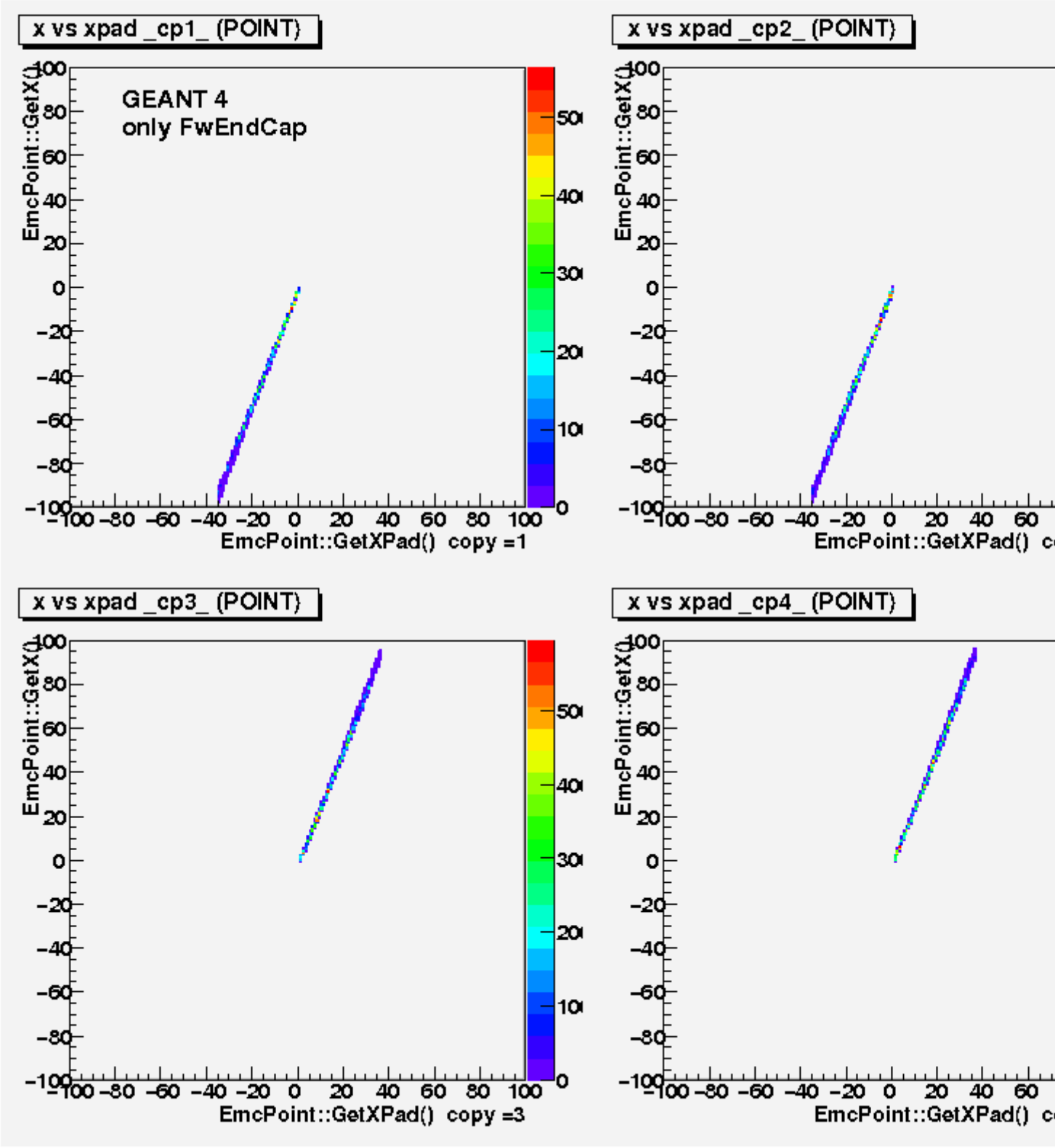




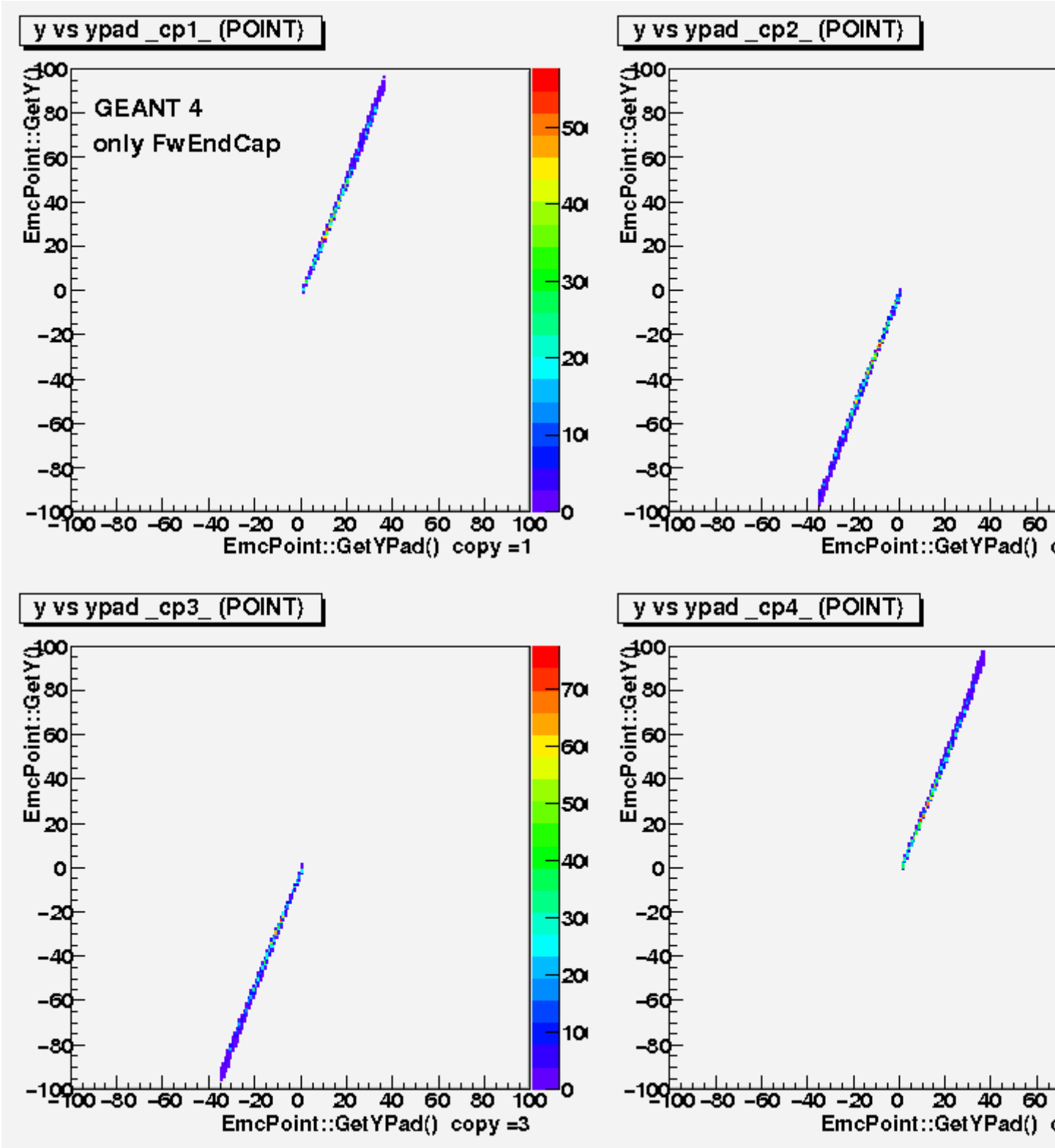




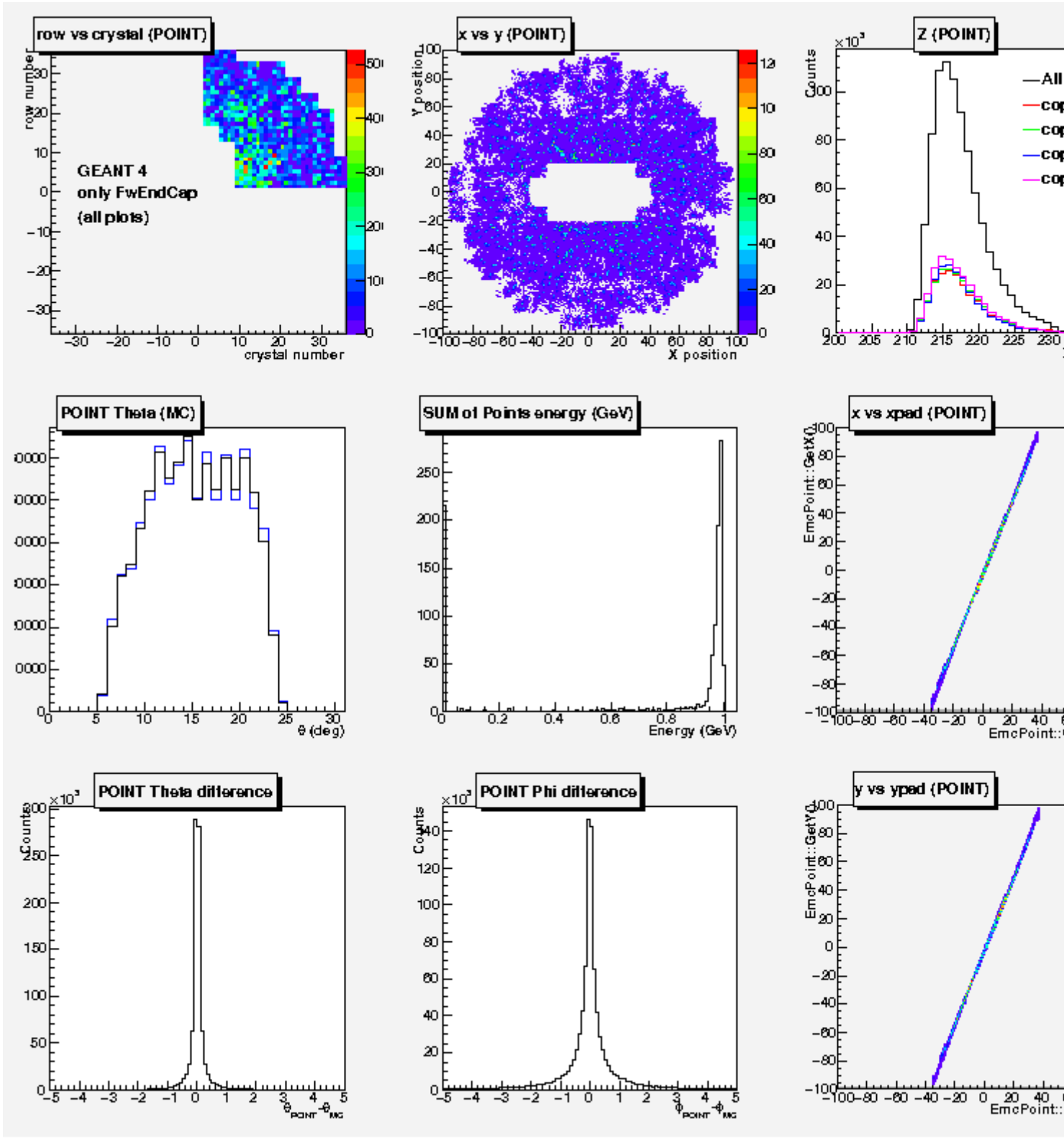
3) xpad_x_points_m3_g4_fixed.png, downloaded 1132 times



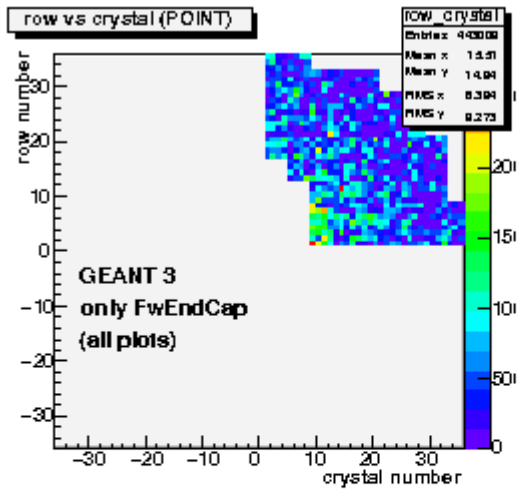
4) ypad_y_points_m3_g4_fixed.png, downloaded 1069 times

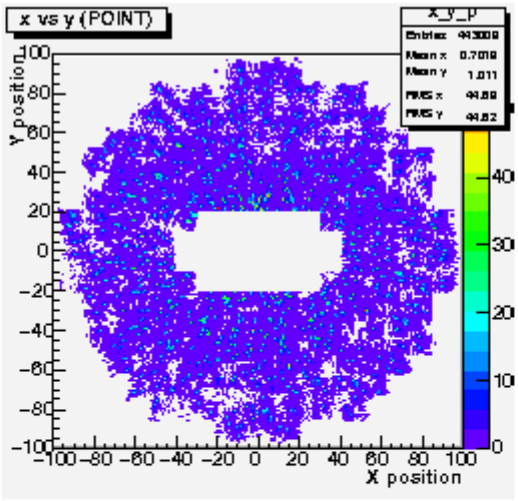


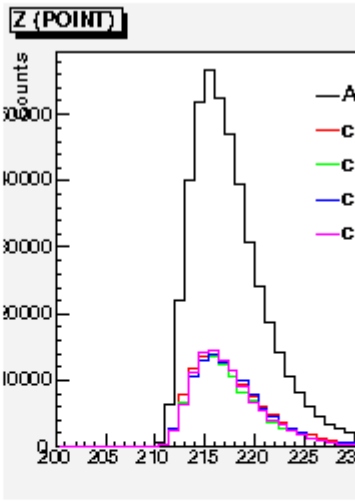
5) points_g4_fwendcap_m3changed_fixed.png, downloaded 1038 times

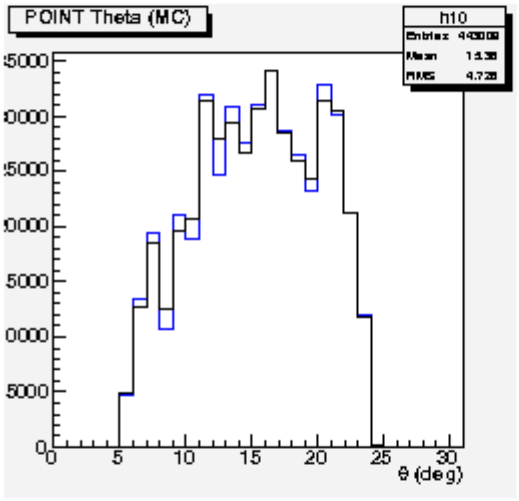


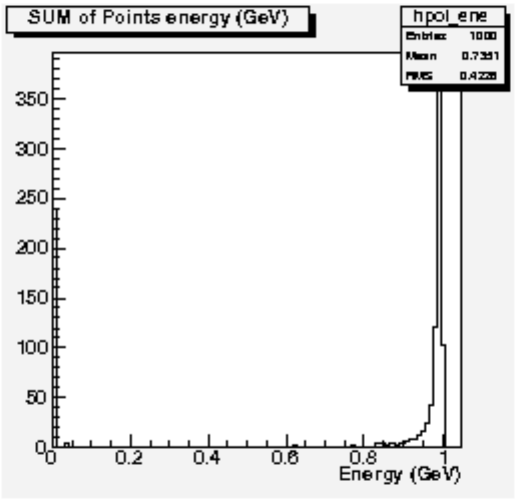
6) points_g3_fwendcap_m3changed_fixed.png, downloaded 987 times

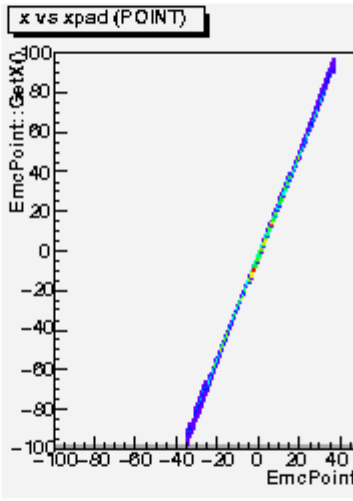

row vs crystal (POINT)
row_crystal
row number
crystal number
GEANT 3
only FwEndCap
(all plots)

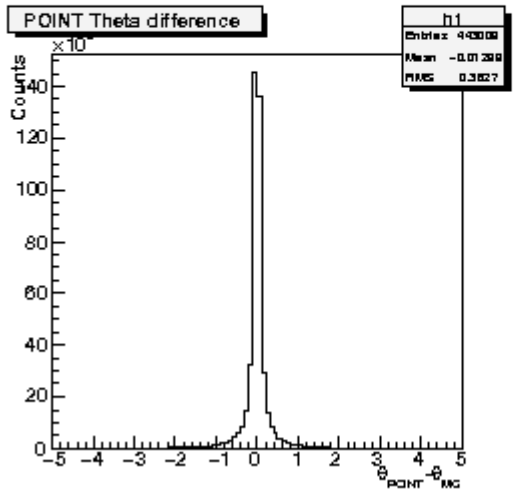

x vs y (POINT)
x_y_P
Y position
X position

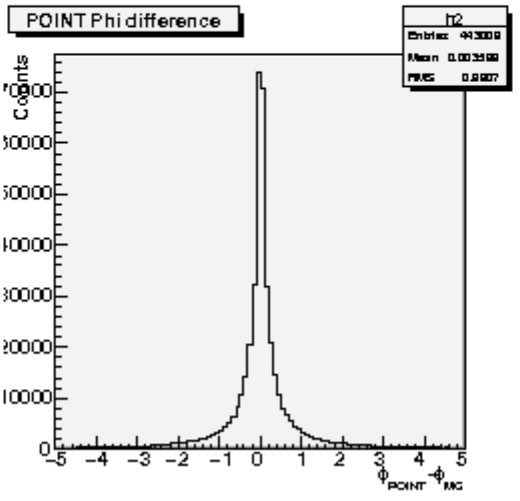

Z (POINT)
Counts

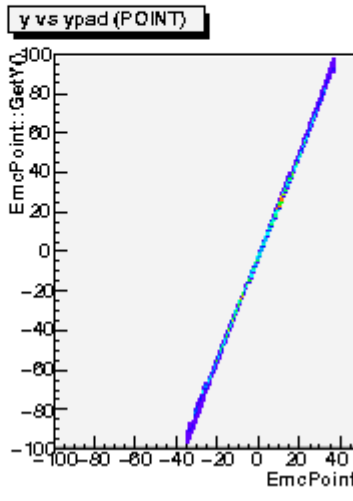

POINT Theta (MC)
h10
θ (deg)


SUM of Points energy (GeV)
hpoi_ene
Energy (GeV)


x vs xpad (POINT)
EmcPoint::GetX()
EmcPoint


POINT Theta difference
h1
Counts
θPOINT-θMC


POINT Phi difference
h2
Counts
φPOINT-φMC


y vs ypad (POINT)
EmcPoint::GetY()
EmcPoint