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Subject: EMC resolution

Posted by [binsong](#) on Fri, 11 Oct 2013 12:05:28 GMT

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hi,

i find some problems with the EMC energy resolution. Maybe there are some bugs.

I do the simulations for electron and photon with box generator with the latest trunk at both barrel region (80deg--100deg) and forward region (12deg--20deg).

i get the reconstructed energy( $E_{rec}$ ) by using `GetEmcRawEnergy()`,

then i plot  $(E_{mc}-E_{rec})/E_{mc}$  for each simulation.

but i find the resolution  $\sigma/E$  much smaller than the result in TDR:

electron\_barrel: 1.18%

electron\_forward: 1.58%

photon\_barrel: 1.07%

photon\_forward: 1.39%

and in TDR, the resolution for photon at 1GeV is more than 2%.

you can find all the four plots in attachment.

does someone know this problem?

Binsong

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### File Attachments

- 1) [electron\\_barrel\\_1GeV.eps](#), downloaded 612 times
  - 2) [electron\\_forward\\_1GeV.eps](#), downloaded 609 times
  - 3) [photon\\_barrel\\_1GeV.eps](#), downloaded 602 times
  - 4) [photon\\_forward\\_1GeV.eps](#), downloaded 590 times
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