
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 σ/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

File Attachments

- 1) [electron_barrel_1GeV.eps](#), downloaded 608 times
 - 2) [electron_forward_1GeV.eps](#), downloaded 602 times
 - 3) [photon_barrel_1GeV.eps](#), downloaded 596 times
 - 4) [photon_forward_1GeV.eps](#), downloaded 582 times
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