## Subject: Question about GetEnergyCorrected()
Posted by donghee on Thu, 14 May 2009 08:24:35 GMT

Dear EMC experts,

I have a question for the function of GetEnergyCorrected().

A function is introduced to estimate the corrected energy of cluster in
PndEmcCluster::GetEnergyCorrected() function.

Where comes from this internal calibration and how much differ from uncorrected one?
I have also checked my event with photon candidate.
The shape is slightly changed, but not so much.
Could you explain, what is the motivation for this correction and why do we need?

Thank you in advance,
Donghee Kang

## Subject: Re: Question about GetEnergyCorrected()
Posted by Dima Melnychuk on Thu, 14 May 2009 09:22:46 GMT

Hi Donghee,

This correction takes into account energy losses due to leakage and energy thresholds for
single crystal - 3 MeV.

It is roughly 3 %, but is dependent on energy and theta angle.

The correction implemented in GetEnergyCorrected() function is ported from the old framework
and should be redone in pandaroot (since different version of Geant4 are used) but it still
roughly do the job.

And in principle it should be latter replaced by the calibration for example on pi0 or eta mass,
but this part of software is still missing.

Best regards,
Dima

## Subject: Re: Question about GetEnergyCorrected()
Posted by donghee on Thu, 14 May 2009 09:28:15 GMT

Dear Dima,

Thank you for your answer.

Best wishes,
Donghee Kang

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Subject: Re: Question about GetEnergyCorrected()
Posted by Bertram Kopf on Thu, 14 May 2009 09:39:48 GMT
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Dear Donghee,

you can also find a description of the photon reconstruction (incl. reconstruction thresholds and leakage corrections) in the Physics Book: sec. 3.3.2 Photon Reconstruction and sec. 3.3.2.3 Leakage Corrections

Cheers,
Bertram.

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