
Subject: Re: EMC resolution

Posted by [Ronald Kunne](#) on Wed, 06 Nov 2013 10:13:11 GMT

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Some remarks on the EMC resolution problem.

1) the present EMC PID is two years old, release 14213.

2) I think what should be available in PandaRoot ideally is two versions for the cluster energy E_{raw} et $E_{corrected}$, where E_{raw} is the cluster energy as close to the value as we will measure it in the experiment, and $E_{corrected}$ a software corrected value to be used for gamma tracks and Binsong's electron correction

3) At present there are three values E_{raw} (non-uniformity off), an E_{raw} (non-uniformity on) et an $E_{calibrated}$ (which is probably wrong, if it uses E_{raw}). Of these: E_{raw} (non-uniformity on) represents the best the data as will be measured in the experiment

4) I checked the resolutions using the tuples made recently by Gosia. E_{raw} and $E_{calibrated}$ give resolutions that practically identical and both are too low.

Description of the plot added.

Upper raw: data using E_{raw}

Lower raw: data using $E_{calibrated}$

1st column: pMC versus $(E_{emc}-pMC)/pMC$ in %

2st column: profile plot of pMC versus $(E_{emc}-pMC)/pMC$ in %

3st column: resolution obtained by fitting Gaussians to slices of the 2D histos.

Greetings,

Ronald Kunne
