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 Eraw et Ecorrected, where Eraw is the cluster energy as close to the value as we will measure it in the experiment, and Ecorrected a software corrected value to be used for gamma tracks and Binsong's electron correction

3) At present there are three values Eraw (non-uniformity off), an Eraw(non-uniformity on) et an Ecalibrated (which is probably wrong, if it uses Eraw). Of these: Eraw(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. Eraw and Ecalibrated give resolutions that practically identical and both are too low.

Description of the plot added.
Upper raw: data using Eraw
Lower raw: data using Ecalibrated

1st column: pMC versus (Eemc-pMC)/pMC in %
2st column: profile plot of pMC versus (Eemc-pMC)/pMC in %
3st column: resolution obtained by fitting Gaussians to slices of the 2D histos.

Greetings,
Ronald Kunne