

Hi,
some of the answers you ask:

Bertram Kopf wrote on Mon, 02 February 2009 17:02

1. Is the gamma gamma analysis for the Physics Book based on rho tools and on the standard "PndMicroWriter". If so than one can explain the efficiency drop for high pbar momenta since the cluster reconstruction and "not the bump splitting" has been used.

No, it does not. The direct EmcBump object is used (or at least, this is what I know, I don't think the analysis was moved to the TCandidate).

Quote:

2. I don't see the place (neither in the reconstruction nor in the analysis part) where the gamma threshold of normally 10MeV or 20MeV has been applied. Did I overlook it somewhere?

Try to look at the parameter directory, in particular macro/params/emc.par (or all.par). In the container [PndEmcRecoPar] you can see that the energy cuts to build a cluster are set to 3 MeV (the units are GeV):

```
EnergyThresholdBarrel:d 3.0e-3  
EnergyThresholdFWD:d 3.0e-3  
EnergyThresholdBWD:d 3.0e-3  
EnergyThresholdShashlyk:d 8.0e-3
```

(8 MeV for the Shashlyk). This is a conservative threshold, at the moment the user should tune the energy cut for his analysis. For my old h_c plots I have always used 30 MeV, I think for gamma gamma analysis there are no cuts, simply the bumps with the highest energies are taken into account (but I have no deep insight on that analysis).

Quote:3. In "PndMicroWriter" the EMC energy correction has been applied by using just a factor of 1.035. The cluster / bump object contains the method "GetEnergyCorrected()". Why is this method not used for the energy correction?

The PndMicroWriter was written before the energy correction by Dima, so it has the old 1.035 factor for the barrel part. I suppose Klaus should implement the new change inside the MicroWriter.

Quote:

4. The objects "PndEmcRecoHit" are finally created in the standard emc reconstruction. Therefore I assume that this list should be the input for the rho analysis? Is this now a dummy which will be used in the future?

The EmcRecoHit was an object requested long time ago by the genfit developers, for Kalman filter. After some time we have decided to not use the emc points for the kalman tracking,

because of the reduced resolution with respect to tracking detectors and because new points make the analysis slower. So at the moment it is a dummy object which is not used at all. Maybe we should remove its task from the standard full_emc.C macro, in order to not introduce further misunderstanding.

At the moment, in the "lhetrack mode", the rho package (with MicroWriter) loops over LhePidTrack, which has the correlation to the EmcCluster of emc barrel (no endcaps), and takes the emc energy from that TCA. LheTrack at the moment does not use Bumps, because when I have written the code the bump code was not tested and those numbers had to be fixed. If we think that the bumps are now stable, I could easily modify the code and take the info directly from the EmcBump.

I remember klaus has developed some other tools for neutral candidates, but I have no insight on his code, one should ask him directly.

I hope I have clarified some doubts.
