
Subject: Re: Photon energy distribution using DPM
Posted by [Bertram Kopf](#) on Mon, 02 Apr 2012 14:51:34 GMT
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Dear Ganesh and all others,
meanwhile, we could reproduce the plots shown in EMC TDR on page 33. We considered the pure MC-truth information of the DPM generator without any secondaries (i.e. w/o the material budget in front of the EMC). In order to get reasonable results we required that all short and long living resonances (π^0 , η , Δ , Σ , etc.) are decaying within the generator. The new plots for 15GeV/c beam momentum are in good agreement with the figures of the EMC TDR and can be seen here:

a) Egam vs. theta
[gam_e_theta.png](#)

b) Egam for 5deg > theta > 21deg
[gam_e_in_fwd.png](#)

In addition you can find here the particle list for the first events where at least 1 photon is in the region between 5deg > theta > 21deg:
[FirstEvents5To21deg.txt](#)

Of course, our results are in disagreement with the results obtained by Ganesh. At the moment I don't know why. But is it possible that in Ganesh studies all long living particles like Λ , Σ , etc. are required to be stable?

Best regards,
Bertram.
