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γ +jet : event balance on GenParticle level

1. Aim

The aim is to look at the **event p_T balance** calculated over **stable gen particles** in pythia γ +jet events:

$$\vec{B} = \sum_{\text{particles with } |i\eta| \leq i\eta_0} \vec{p}_T$$

where $i\eta$ is the η index of the calo tower containing particle's η . The value $i\eta_0 = 41$ corresponding to particles in the HB,HE,HF acceptance ($\eta \leq 5.191$) will be used mostly, and $i\eta_0 = 38$ ($\eta \leq 4.538$) -- for comparison.

The **variables** to be analysed are

- $B = |\vec{B}|$
- and \vec{B} components:
 - ◆ B_1 -- the component along $(-\vec{p}_T^z)$
 - ◆ B_2 -- a perpendicular component (along $\hat{z} \times -\vec{p}_T^z$)

2. Sample

Input sample:

- [/castor/cern.ch/user/ff/fedotov/Aj/mc/crab/PhotonJet_Pt15.Summer10-START36_V9_S09-v1.GEN-SIM-RECODEBUG](#), `xxx=001-120`
 - ◆ 30k pythia γ +jet evs, PThat > 15 GeV
 - ◆ a partial copy of [/PhotonJet_Pt15/Summer10-START36_V9_S09-v1/GEN-SIM-RECODEBUG](#) [↗](#)
More... Close
 - ◆ crab job:
`copy_full_evs.py` [↗](#), `crab.cfg`, `CMSSW_3_6_3`,
the output files in CASTOR directory renamed with `~/scripts/crab_out_rename`

Job:

- [My/TutReadP6Out](#) [↗](#) package, version comitted 05.12.10 at 09:18 , output: `stdout` , `root`

This topic: [Main > AVFLogA011EvBalAjGenPart](#)

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