

Status / Plans for QCD MC Production & Jet E Scale Issues for 5.3.1 Simulation

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Highlights :

- Status & Plans:
 - current request
 - future request
- 5.3.1 Data vrs. MC in Terms of Central Jet E-Scale
 - 4.10.4 vrs 5.3.1 raw central jet E-Scale comparison from photon-jet balancing

Current 5.3.1 Monte Carlo Request

(QCD/Jet-Correction Group Joint Request)

- ◆ Photon-Jet Pythia: $P_T^{\min} > 22, 40 \text{ GeV}$ 2M (each)
- ◆ Photon-Jet Herwig: $P_T^{\min} > 22, 40 \text{ GeV}$ 2M (each)
- ◆ Di-Jet Pythia: $P_T^{\min} > 0, 10, 18, 40, 80, 120,$
 $140, 200, 260, 320 \text{ GeV}$ 5M (each)
- ◆ Di-Jet Herwig: $P_T^{\min} > 18, 80, 140 \text{ GeV}$ 5M (each)

Future 5.3.1 Monte Carlo Request

- ◆ I) Di-Jet Pythia up to $P_T^{\min} > 600 \text{ GeV}$ (same stat. as above)
- ◆ II) Di-Jet Herwig for all P_T s up to $P_T^{\min} > 600 \text{ GeV}$ (same stat.)

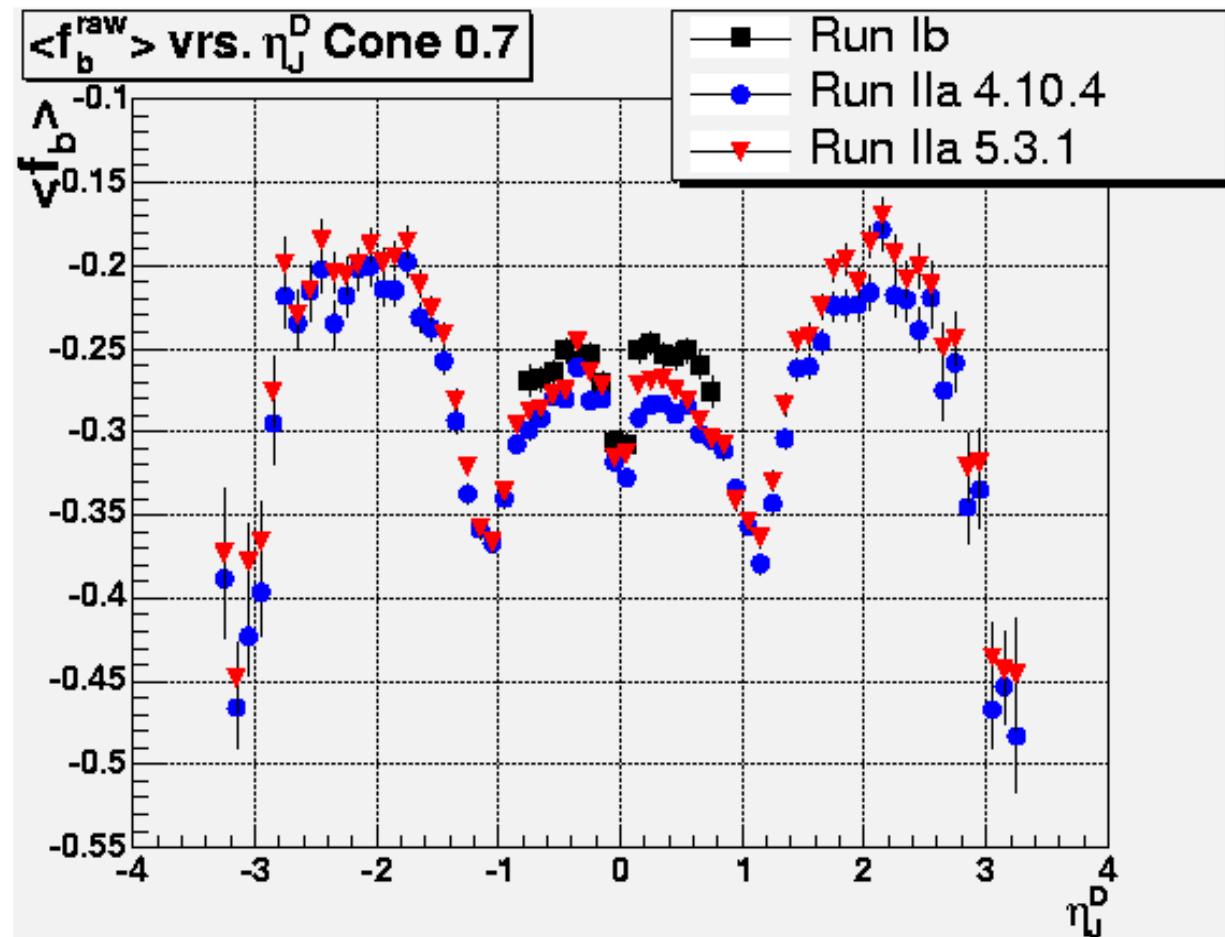
What's New in 5.3.1 Data w.r.t. 4.10.4 ?

New CHA LER's from MIP studies (details in [cdf-6891](#))

~ +1.5 % effect on centr.
Jet E-Scale observed from
4.10.4 – 5.3.1 diff. in γ -jet
balancing: $f_b = (P_T^J - P_T^\gamma)/P_T^\gamma$

f_b vrs. η_J^D :

- => increased effect for $|\eta| < 0.5$ from η -dependent LER's
- => difference in Plug response from updated calibrations also observed



5.3.1 Calorimeter Simulation Has Been Tuned on 4.10.4 MinBias Data:
Expected Impact on 5.3.1 Central Jet Absolute E Scale (ave. ~ - 1.5 %)