Progress on jet ID and jet rates II

QCD meeting : December 3, 2001

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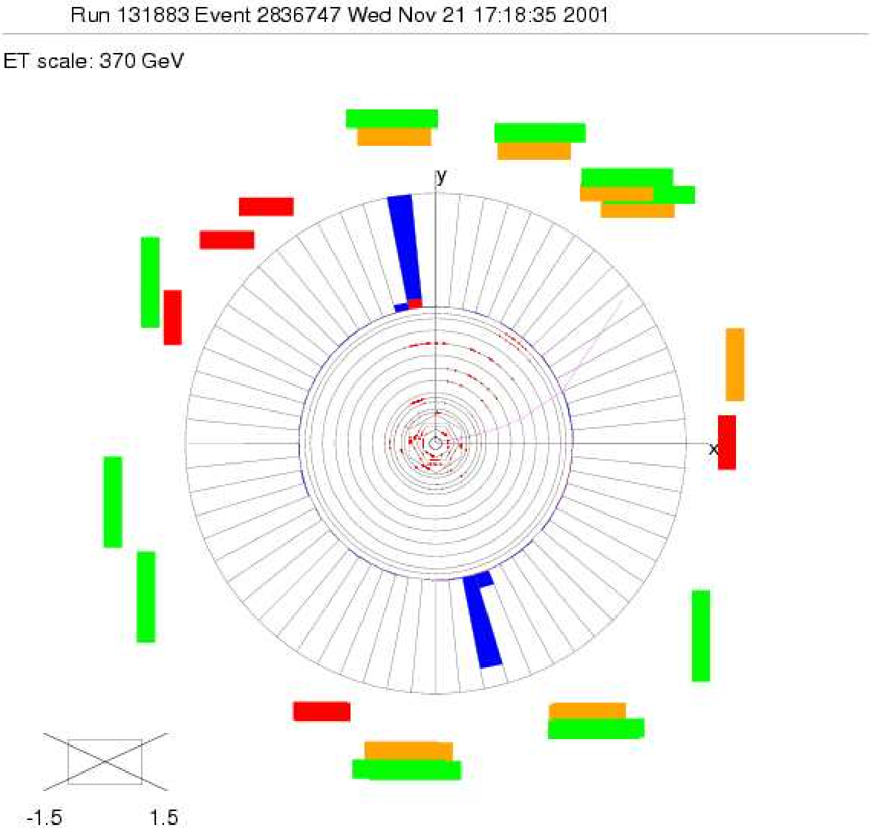
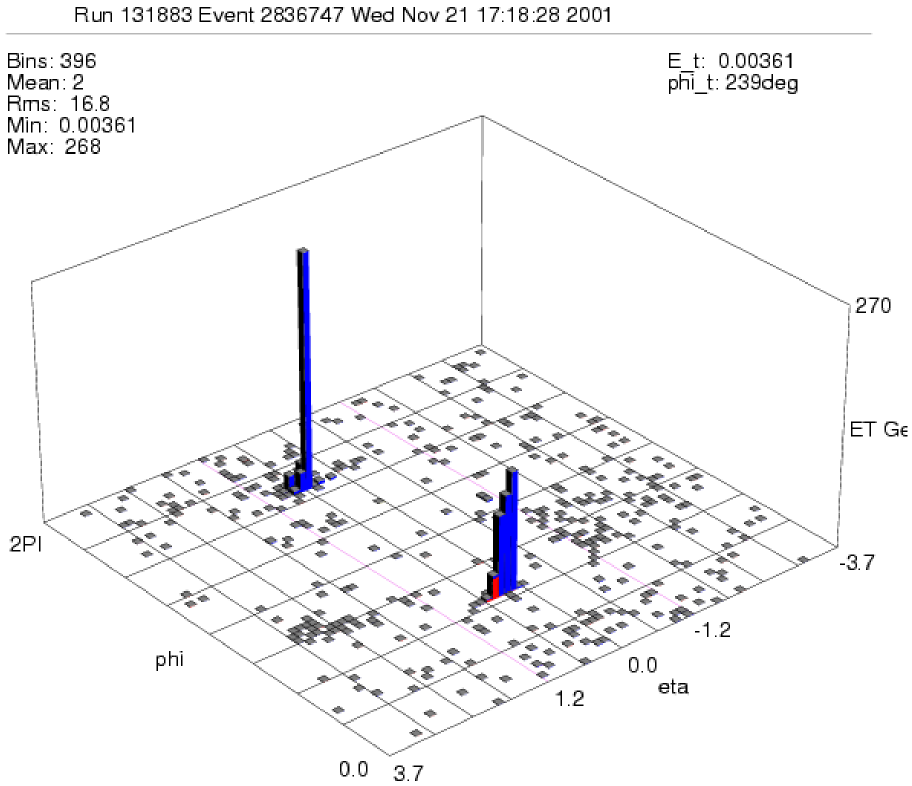
Highest pT event

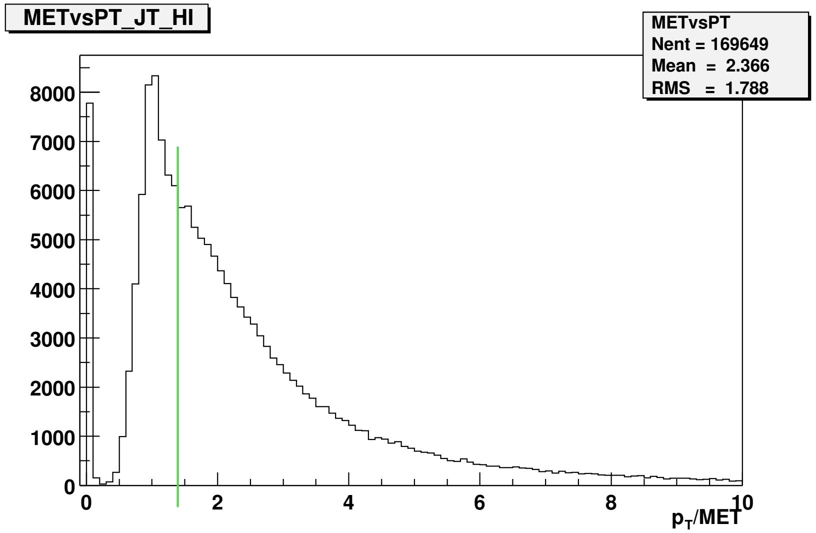


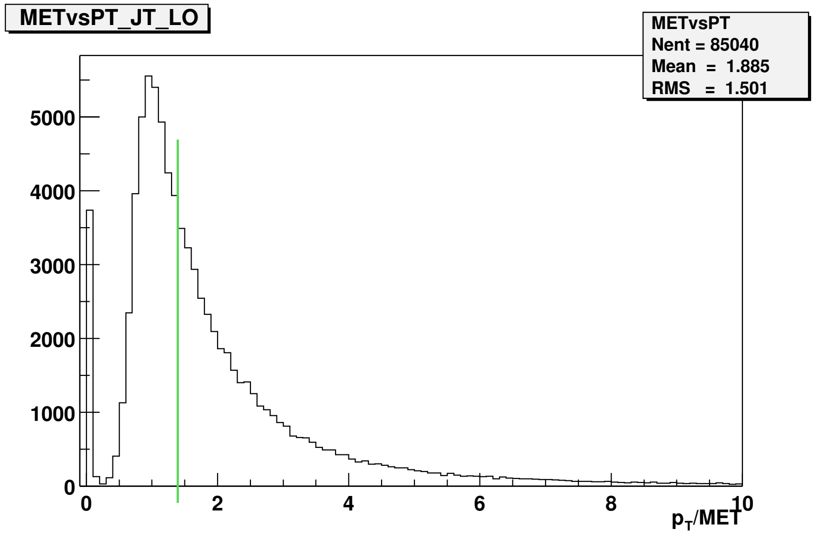


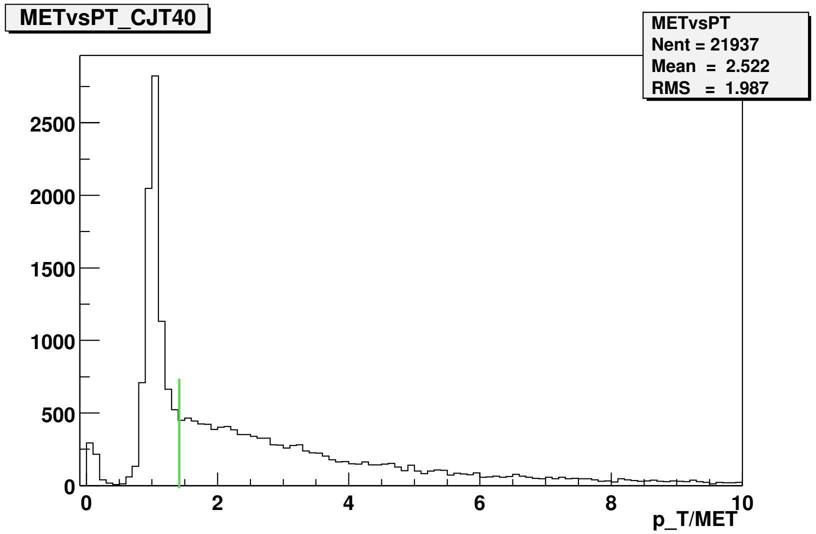
MET over PT

- ▷ *are we really sure about the event selection criterium*

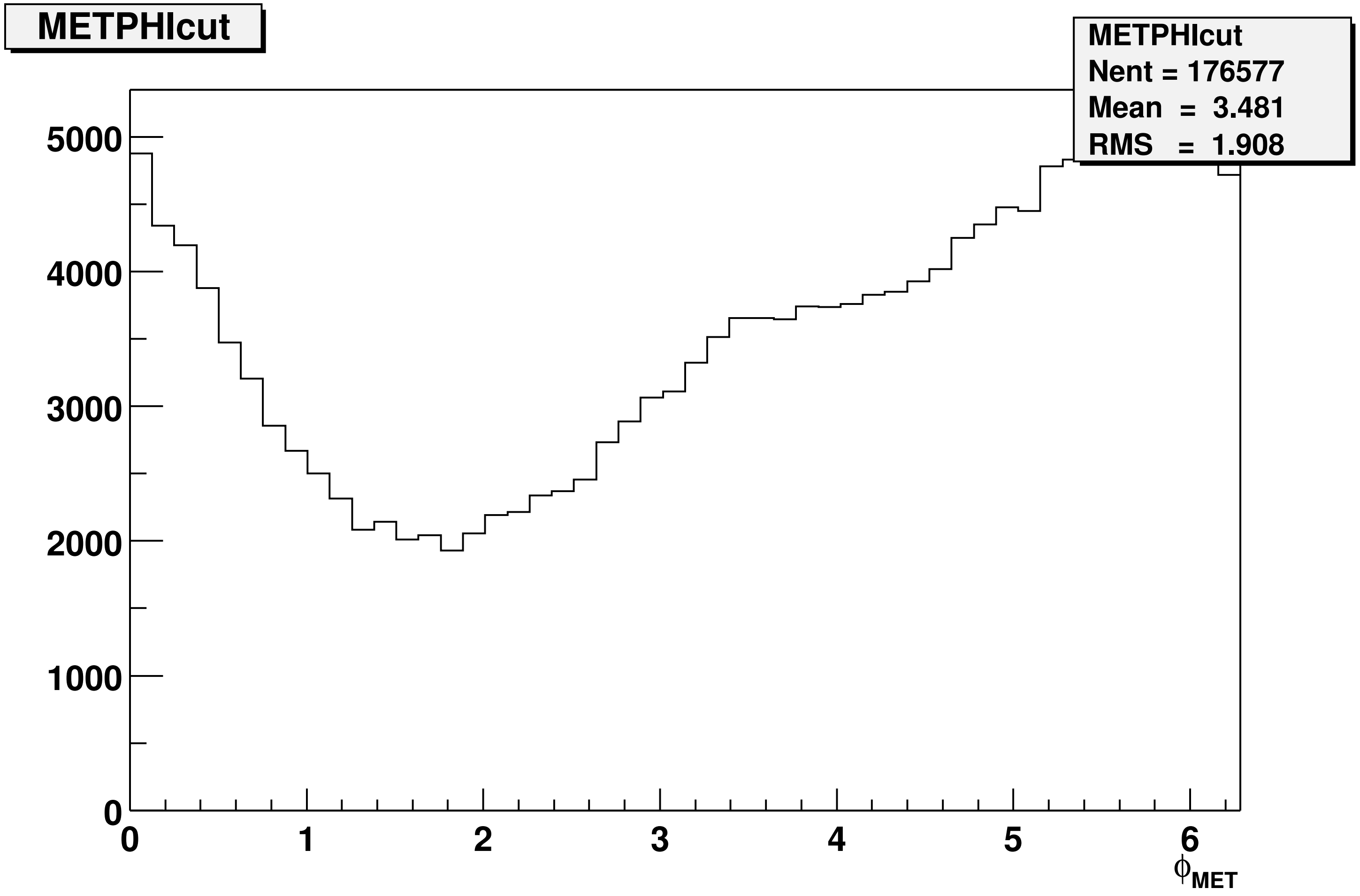
$$MET < 0.7\, p_T^{leading\ jet}$$







MET after selection cuts

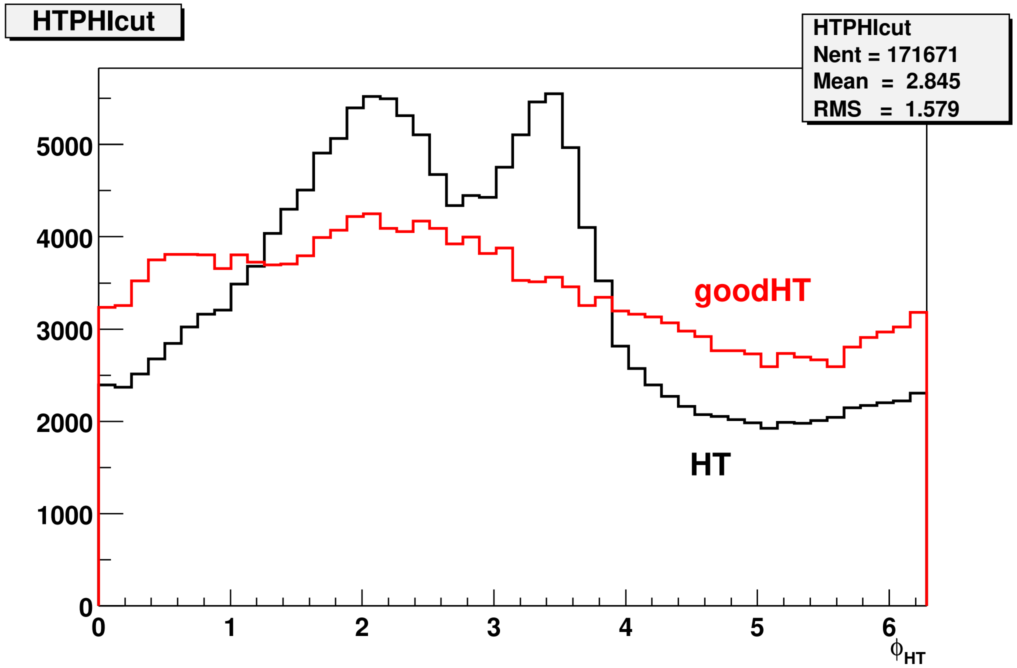


using HT instead of MET

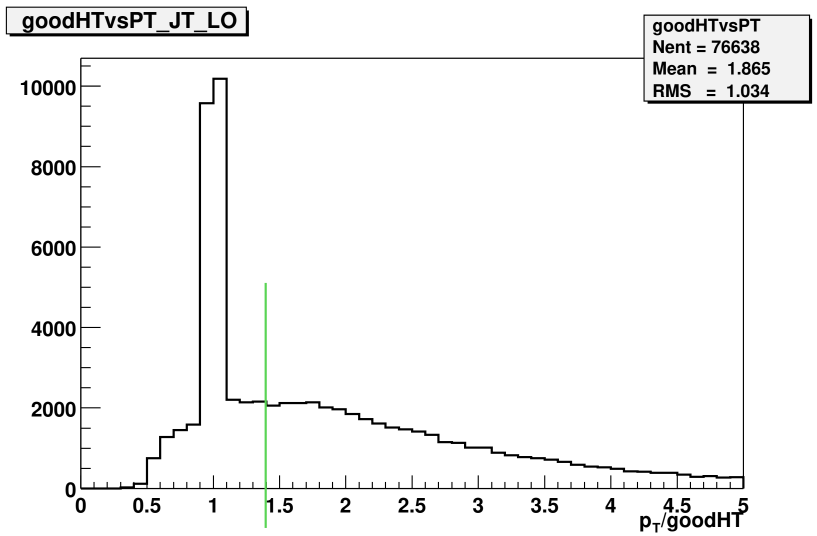
- using $\vec{H}_T$ calculated from jets instead of MET
- $\vec{H}_T$ calculated from all jets in the event or only from 'good' jets (i.e. jets that passed jet quality cuts)

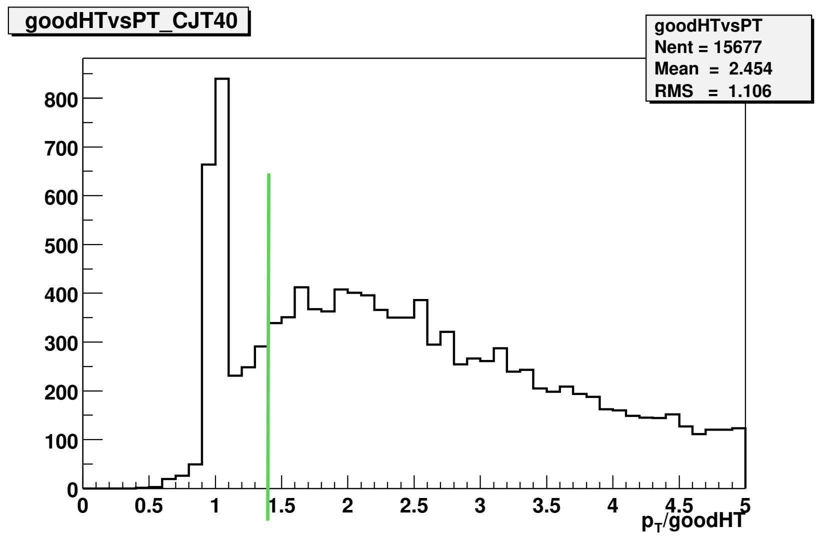
$$goodHT < 0.7 p_T^{leading\ jet}$$

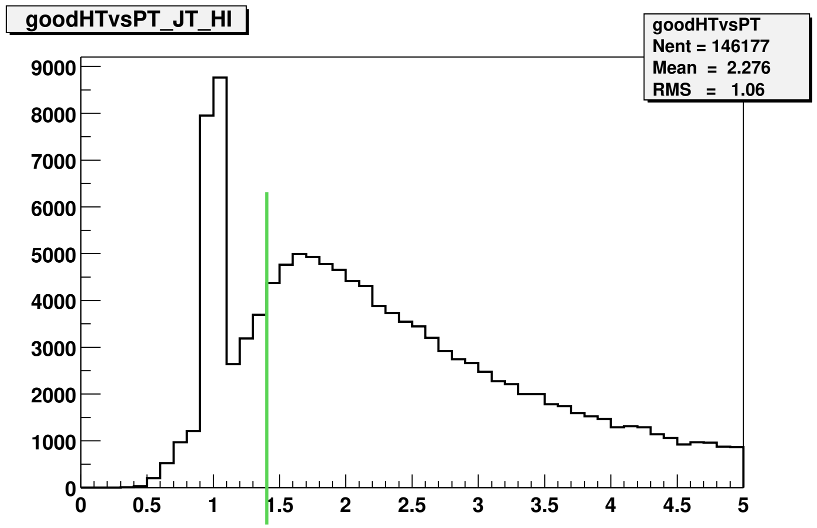
$$E_{100} > 2\,\text{TeV}$$



goodHT over PT



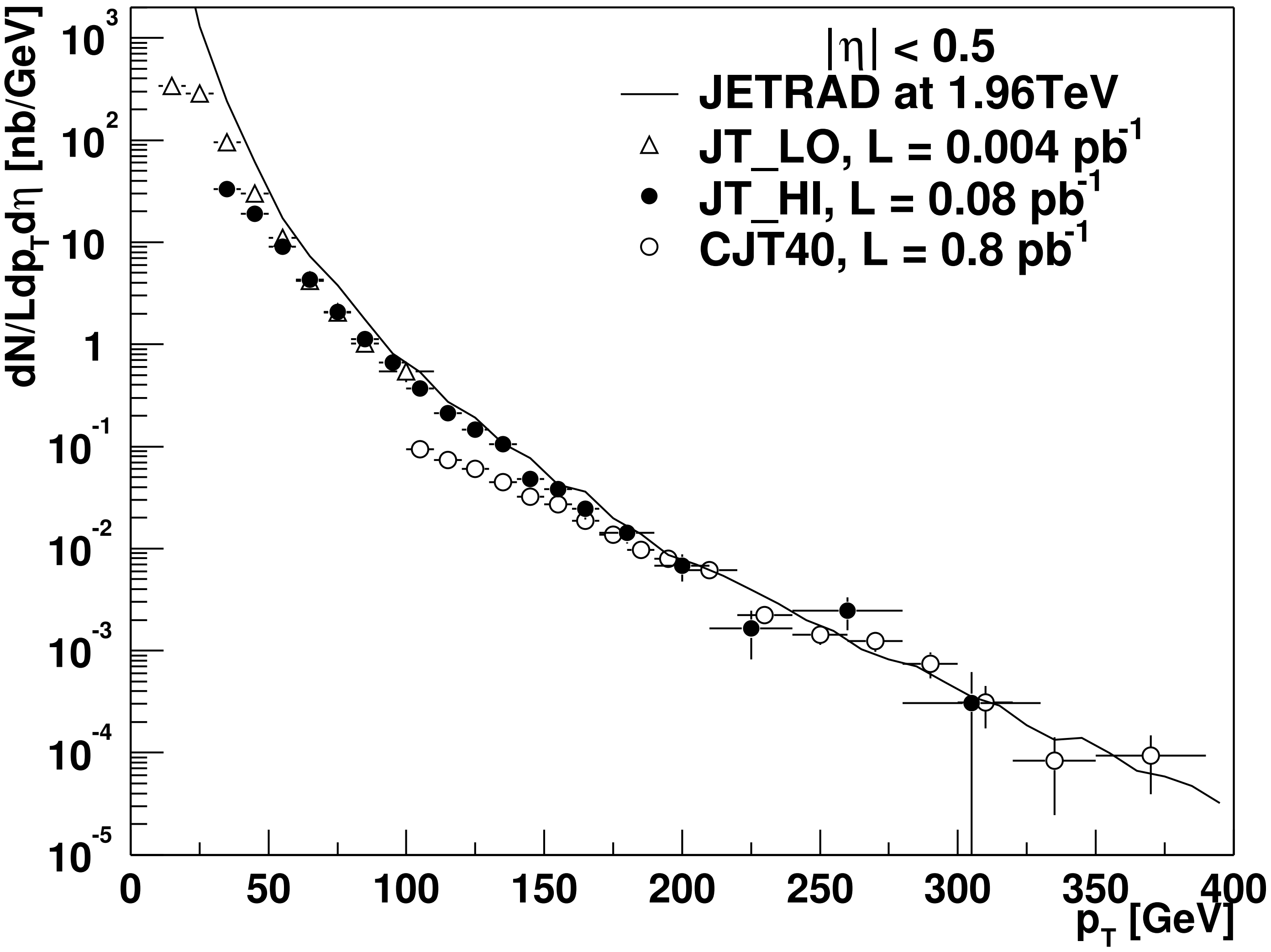




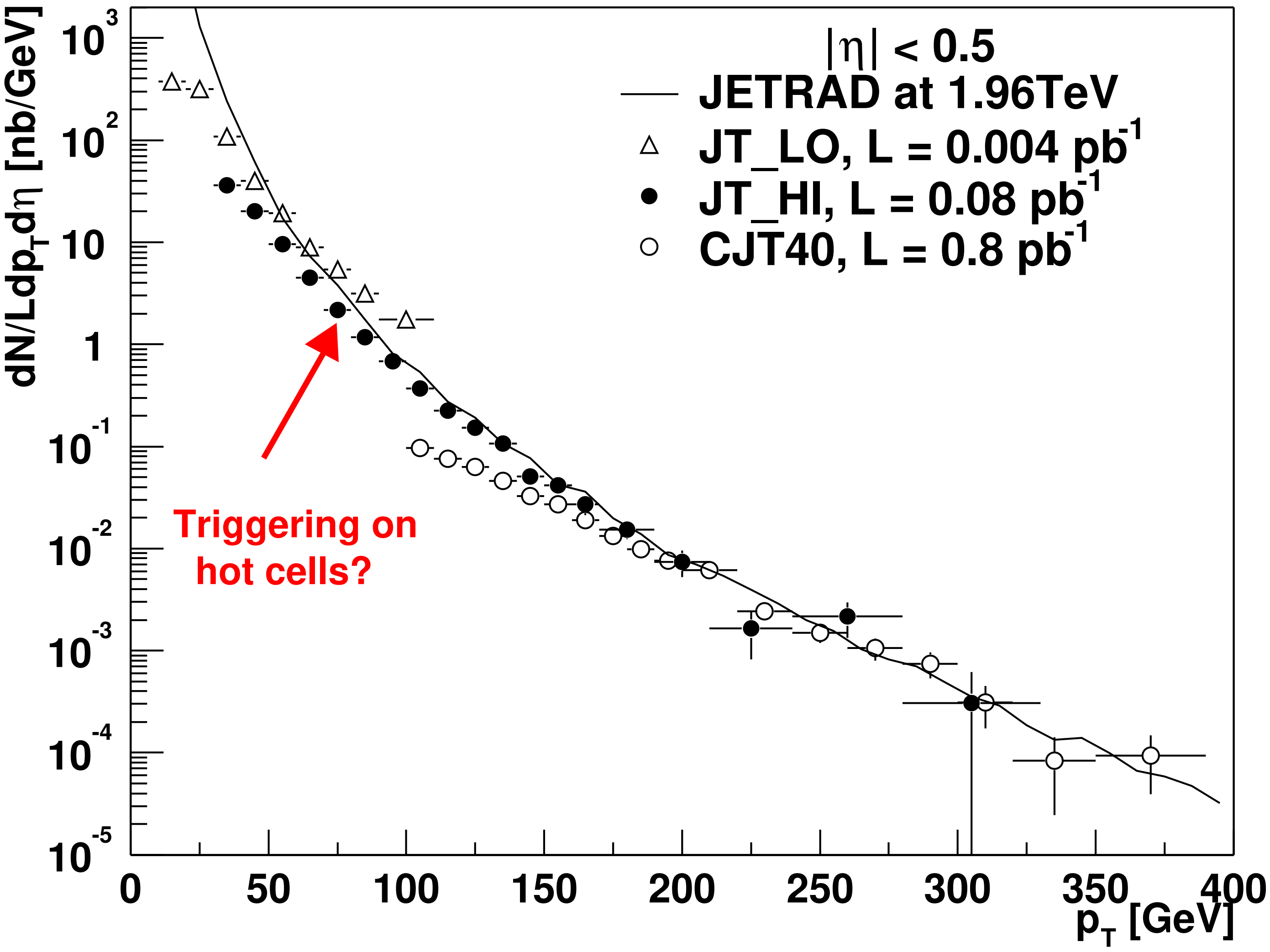
jet energy scale

- new package `JetCorr`
- (very) first and crude version of RunII jet energy scale corrections
- featuring
  - EM scale factor
  - offset correction (important for low p_T jets)
  - energy response corrections (much more larger then in RunI)
  - showering corrections (not that important for cone 0.7 in central region)

jet rates after MET cuts

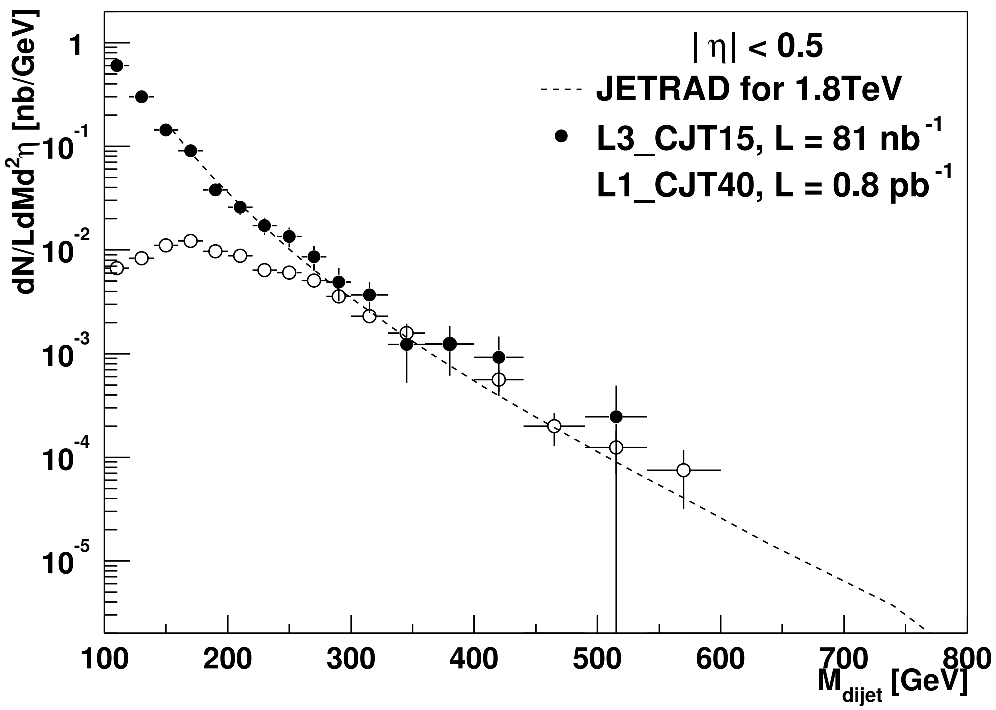


jet rates after HT cuts



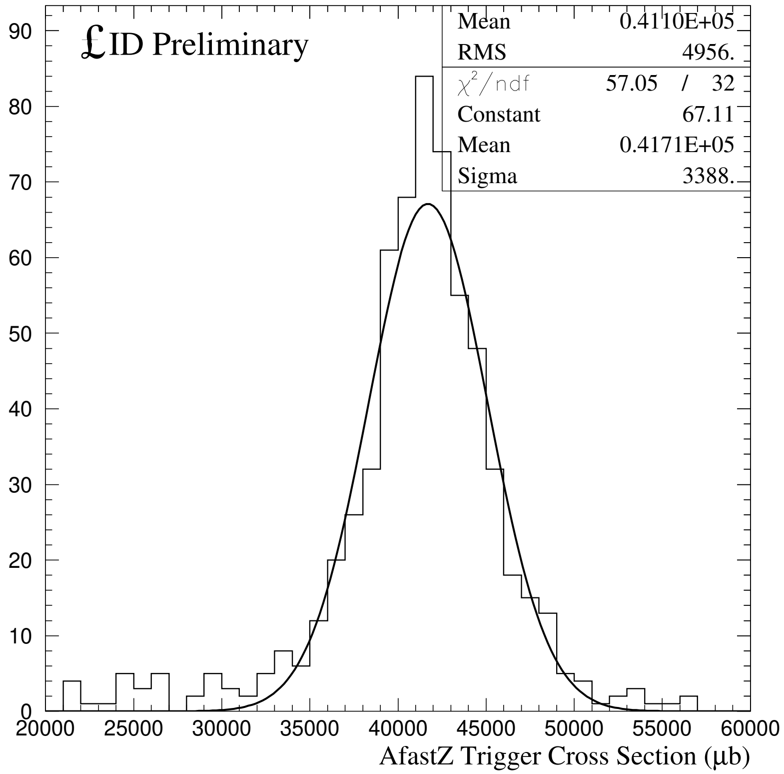
dijet mass

- *event selection criteria*
  - *two good jets in central reagion* ($|\eta| < 0.5$)
  - $MET < 0.7\, p_T^{leading\ jet}$
  - $E_{100} > 2\,\mathrm{TeV}$
- RunI *jet quality cuts*



luminosity at L3

- minimum bias trigger should have $\sigma = 43\,mb$
- on L1 it looks like (Michael Begel)



- using `lm_access` package I got $\sigma = 33\,mb$
- Could be this information used for correction of L3 trigger luminosities?