Top to stop analysis update

Outline

- Inclusive jet trigger Jet_30, jet_3_mon,jet_50, jet_85 and jet_max
- QCD background estimate --- mEt spectrum fitting
- An alternative fitting

jet trigger

- **jet_30+jet_3_mon**:

0.356+0.867=1.223pb^-1 Ec=40 GeV

(heavy prescaled)

- **jet_50**:

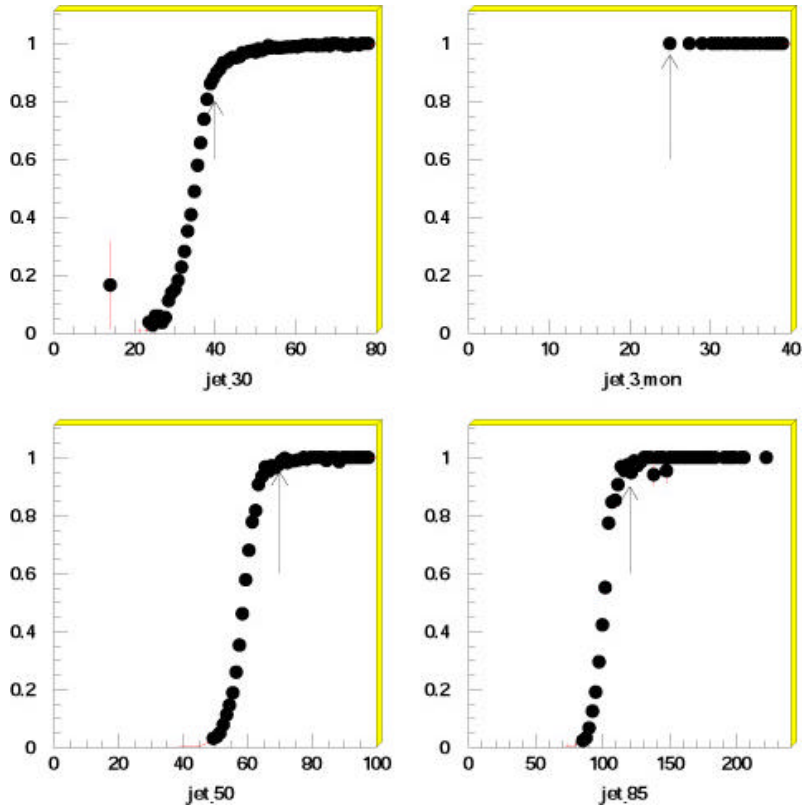
4.684pb^-1 Ec=75 GeV (heavy prescaled)

- **jet_85**:

57.09 pb^-1 Ec=115 GeV (small prescaled)

- **jet_max**

93 pb^-1 Ec=135 GeV (mim prescaled)



QCD estimate: fitting mEt spectrum:

Make mEt spectrum at low range and use 3 functions to fitting:

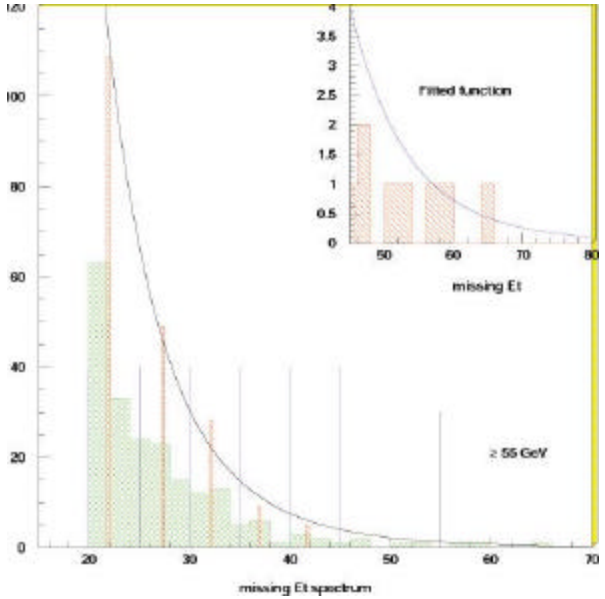
normalized function: abexp(-(sqrt(bmEt)-sqrt(bmEtc))/2(1+sqrt(bmEtc)

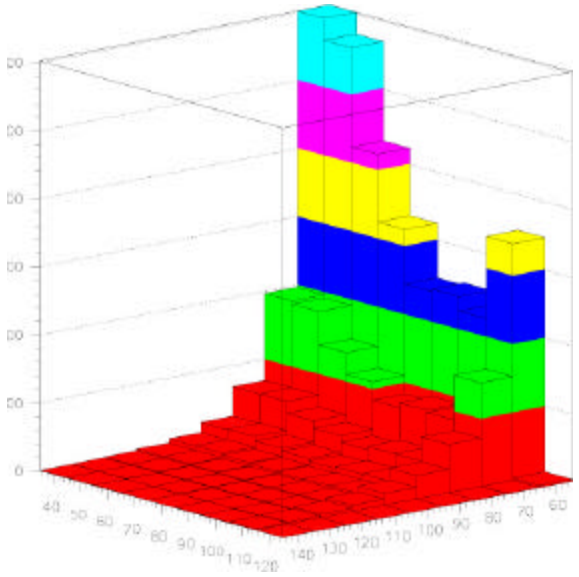
Gaussian: c1exp(-((mEt-c2)^2/2c3)

exponential function: exp(c1+mEtc2)

Choose the fitting with min chi square as estimated QCD background

Because of the bigger difference in luminosity, there are big fluctuations





Another fitting procedure

- In order remove the fluctuation in QCD, we use an exponential function to fit QCD background at low Et range and extrapolate to high Et range. We use jet_3_mon+jet_30 sample to get QCD at Et>40 GeV because at this range these two triggers are fully efficient.
- Or get QCD at high Et range, the low range value is derived from this exponential function. We use jet_85+jet_max sample in order to have good efficieny and good statistics at Et>110 GeV.
- Compare luminosities of the two methods, the latter is better.