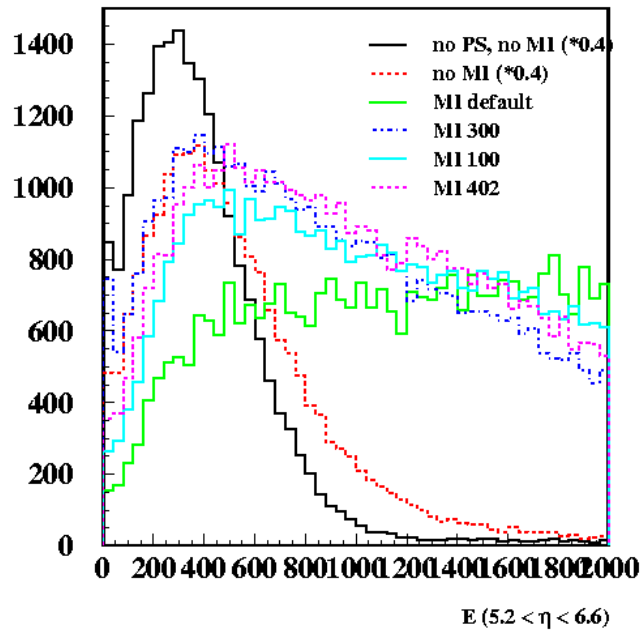


with PYTHIA 6.414 compare different options:

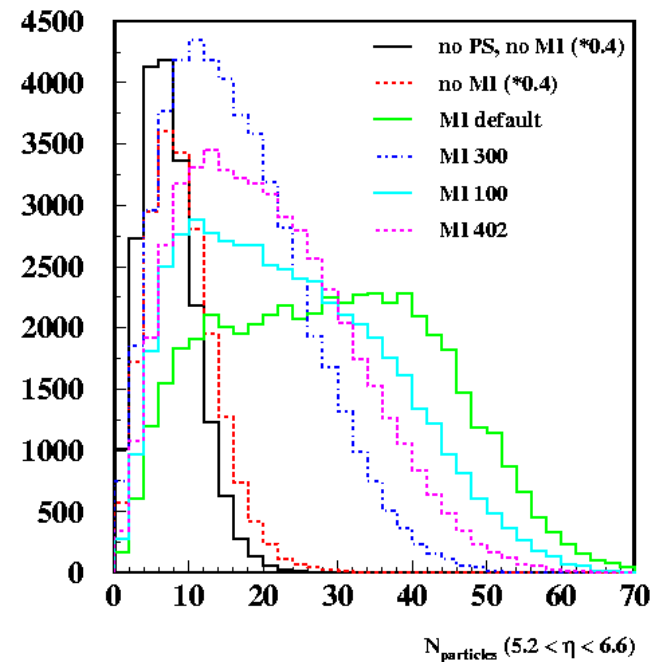
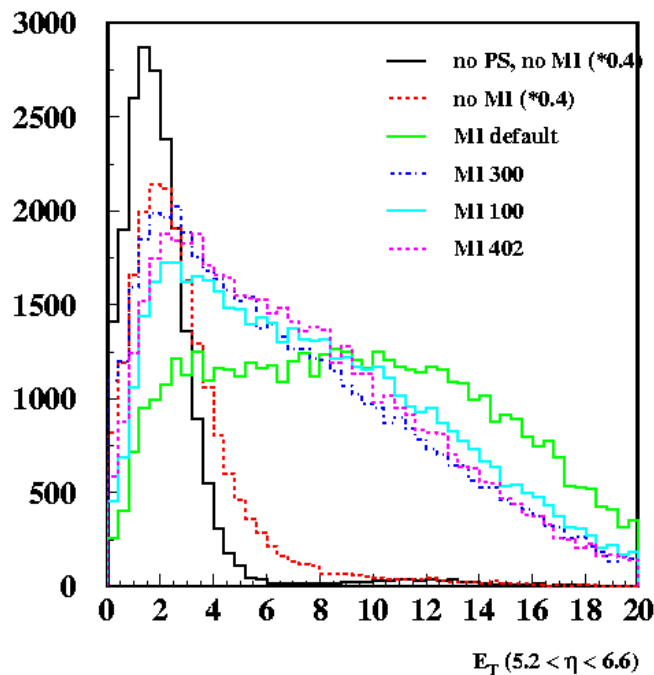
- no parton showers, no MI MSTP(61)=0, MSTP(71)=0, MSTP(81)=0
- parton showers, no MI MSTP(81)=0
- parton showers, MI
 - MSTP(5)=100 → R.Field CDF tune A
 - MSTP(5)=300 → Sandhoff-Skands tune 0
 - MSTP(5)=402 → GAL1
 - pythia default

try CKIN(3)=5, 10,15,20

ΣE_T , E and N of hadrons for $5.2 < \eta < 6.6$ ($\sim$ CASTOR)

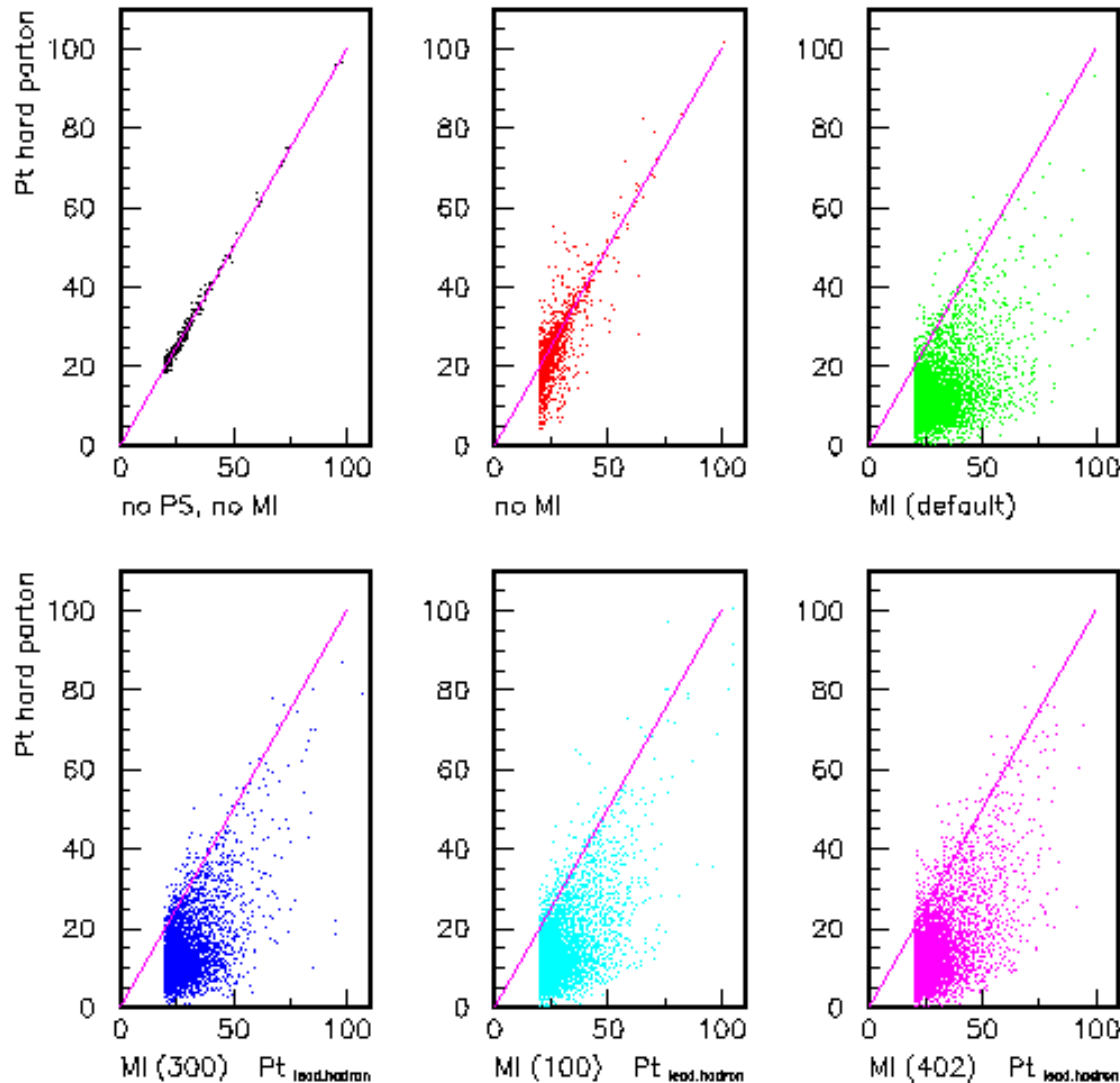


CKIN(3)=10



Pt_leading_hadron jet vs parton (parton is the one from $2 \rightarrow 2$ hard scattering)

CKIN(3)=5

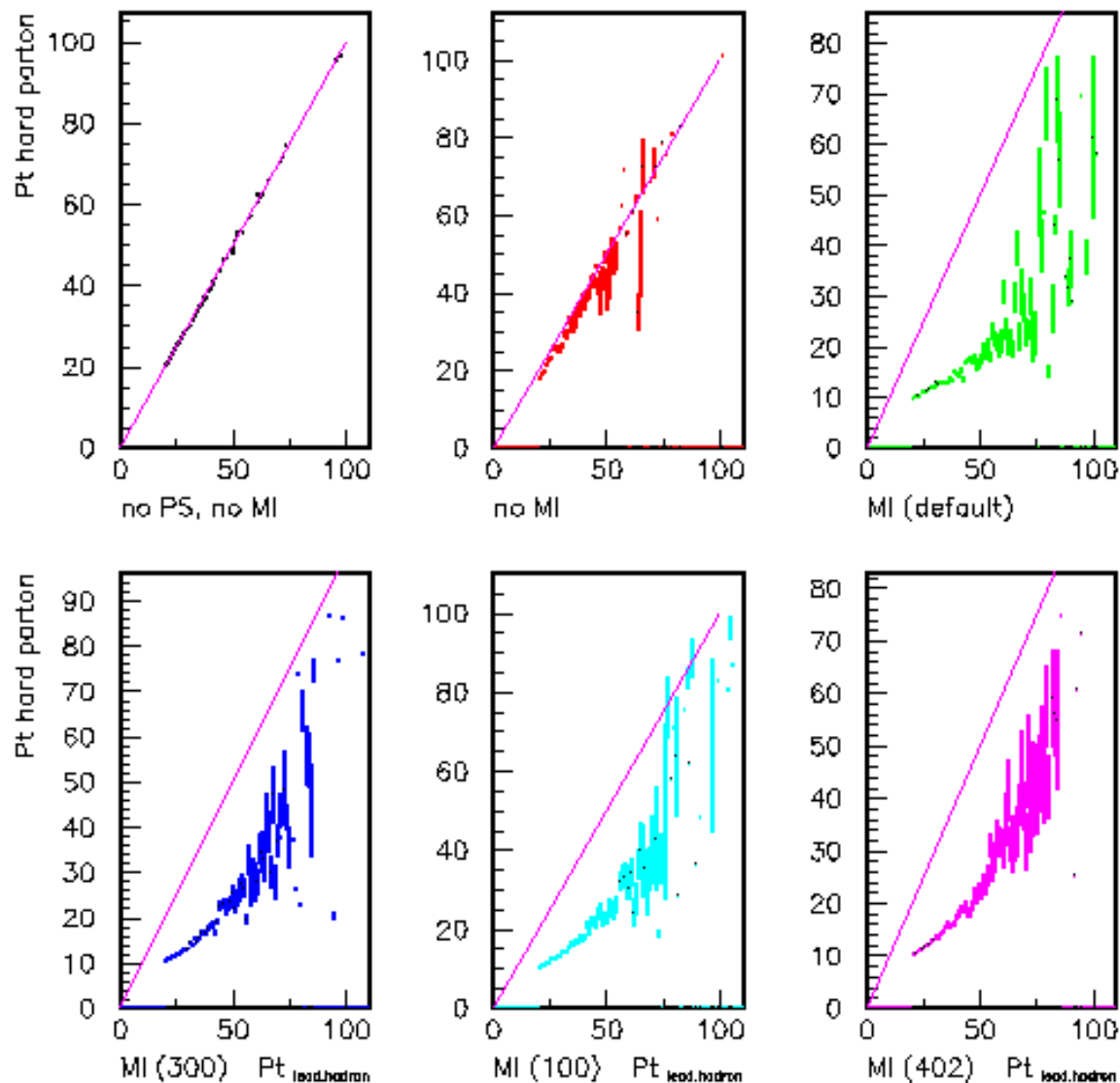


Can we get 'true' jets from the measured 'hadron' jets?

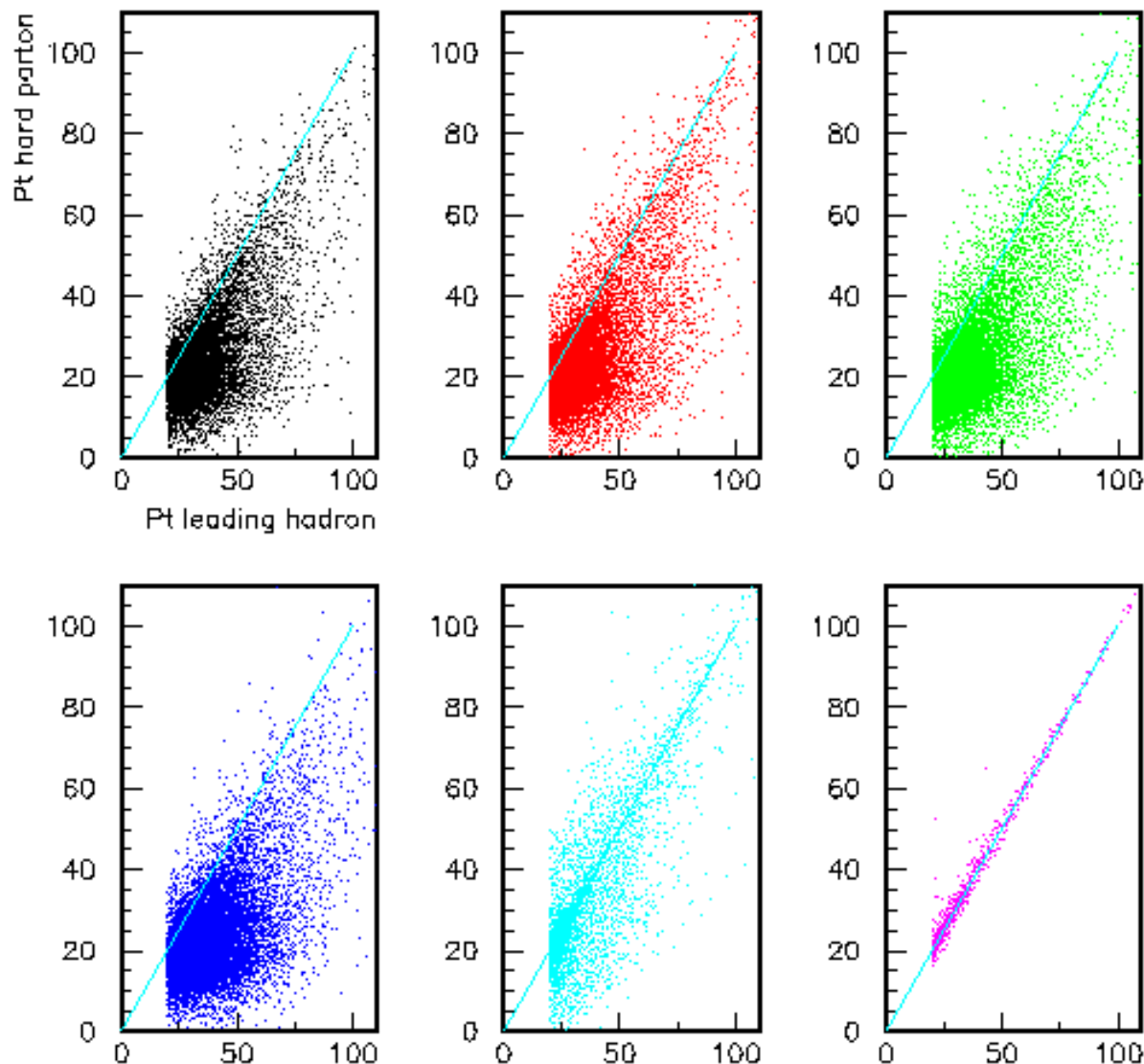
good correlations between 'leading' jets and partons

Pt_leading_hadron jet vs parton
(parton is the one from $2 \rightarrow 2$ hard scattering)

CKIN(3)=5



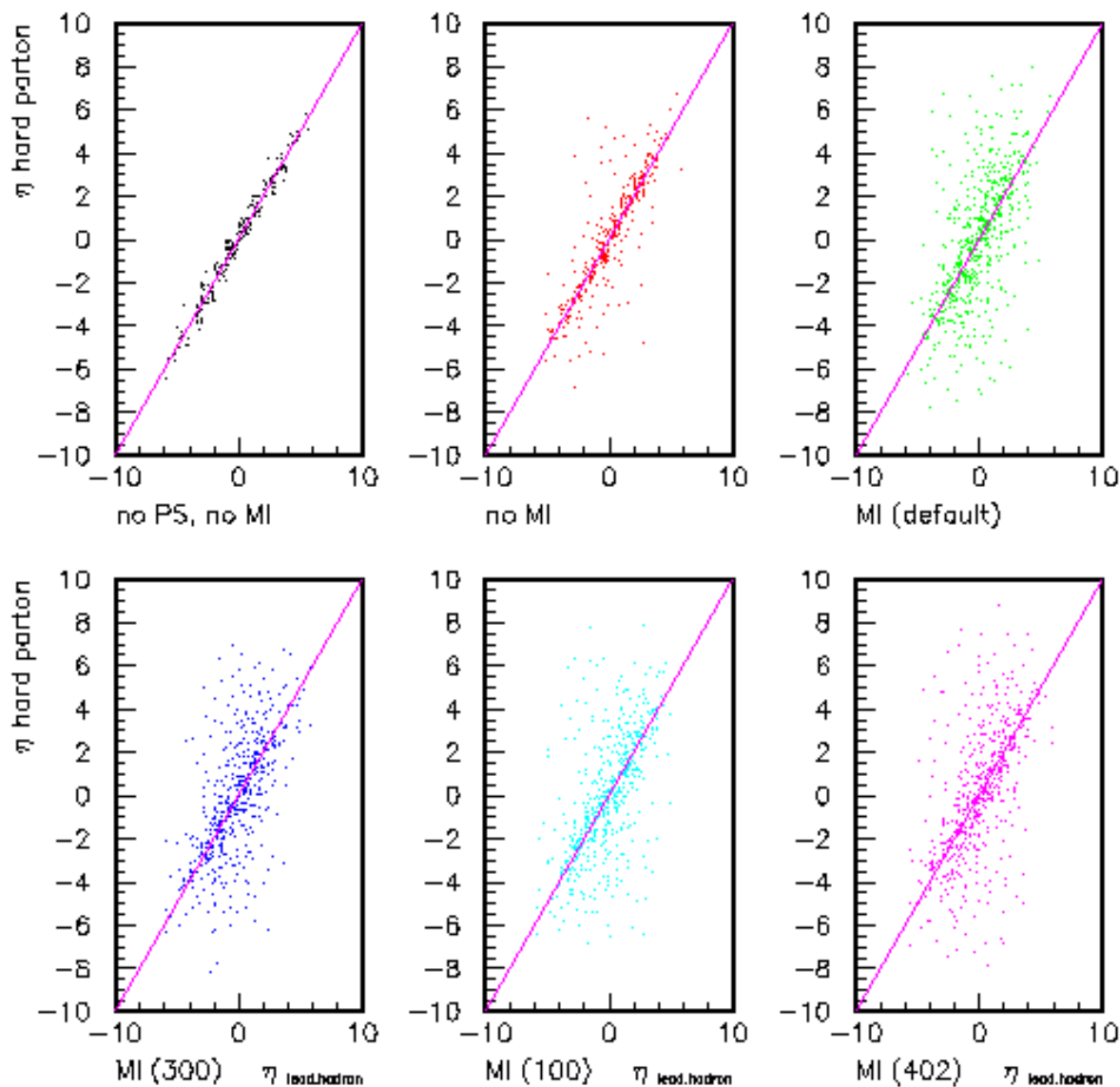
Pt_leading_hadron jet vs parton (parton is the one from $2 \rightarrow 2$ hard scattering)



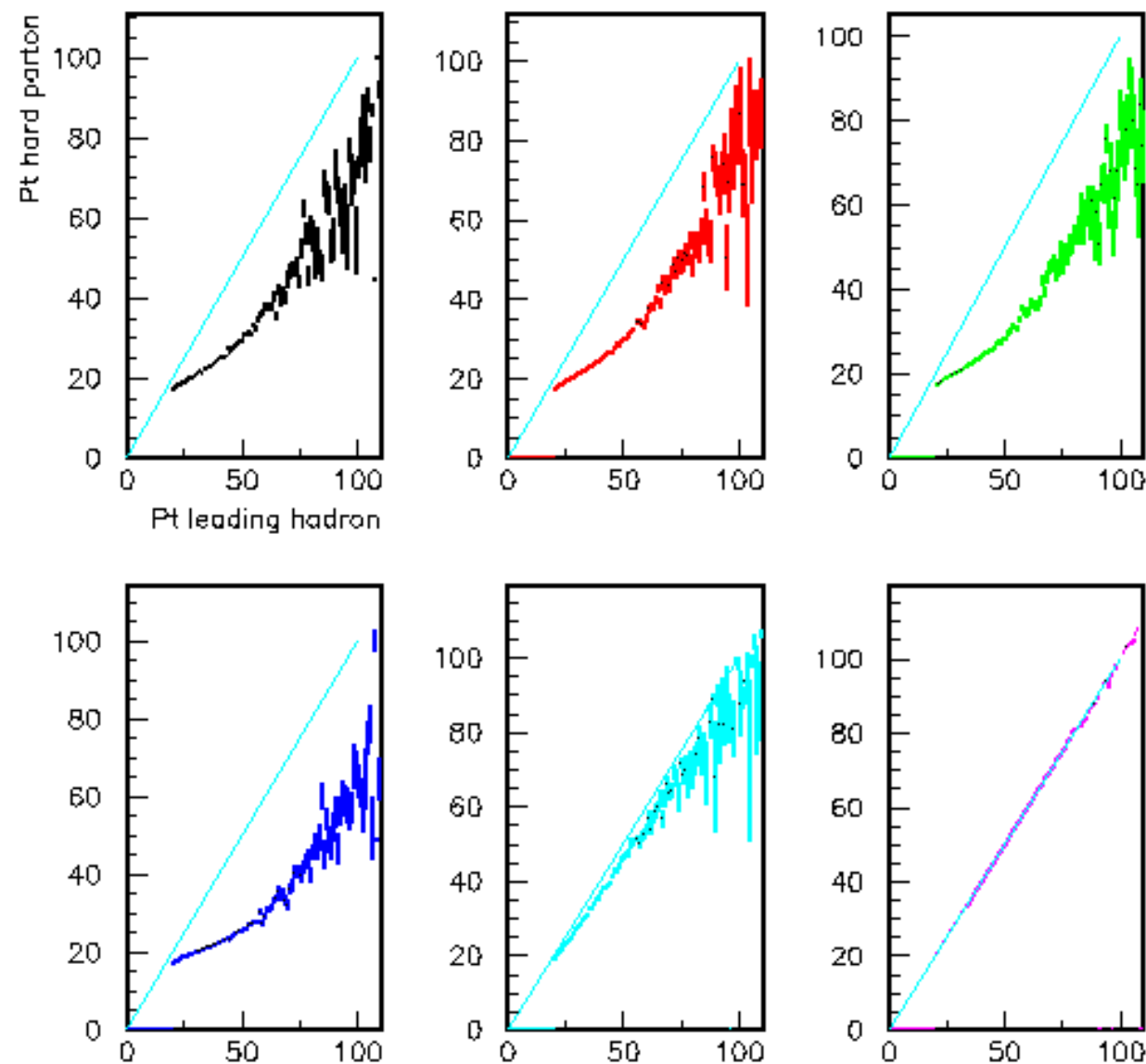
- MI 300
- MI 402
- MI 100
- MI def
- no MI
- noPS, no MI

increase Ptcut
CKIN(3) to 20

eta_leading_hadron jet vs parton
 (parton is the one from $2 \rightarrow 2$ hard scattering)



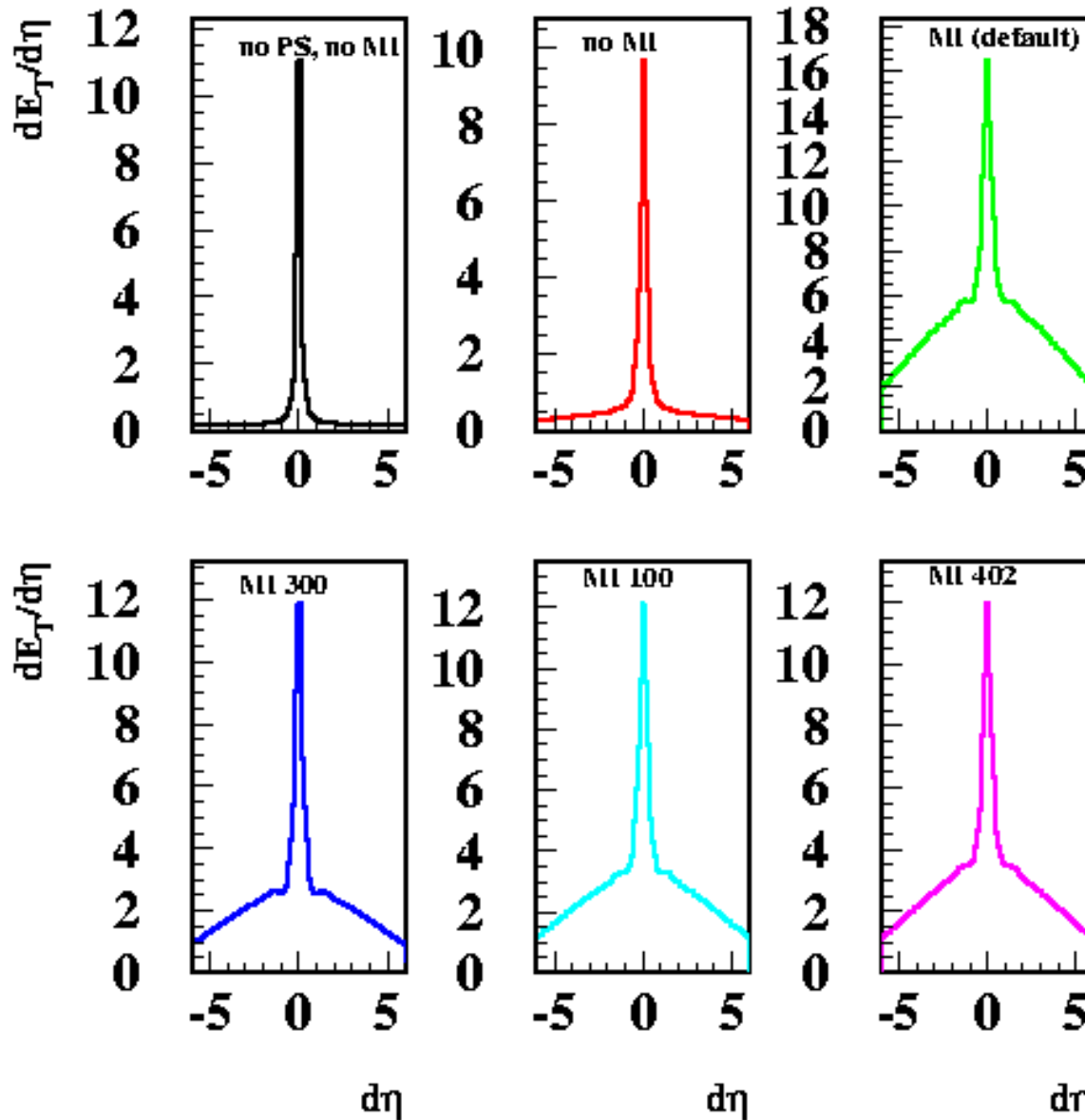
Pt_leading_hadron jet vs parton
(parton is the one from $2 \rightarrow 2$ hard scattering)



— MI 300
— MI 402
— MI 100
— MI def
— no MI
— noPS, no MI

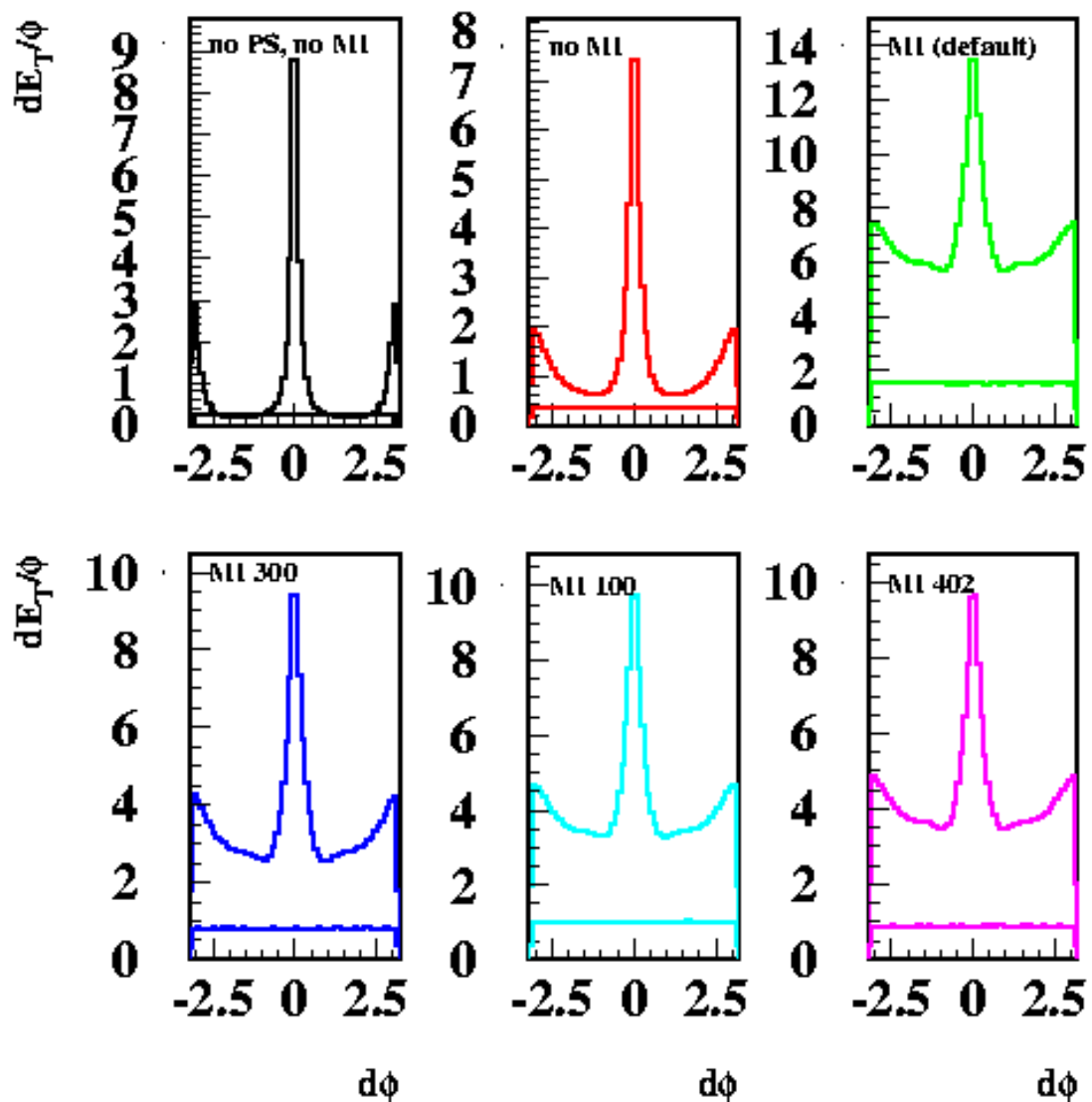
Jet profiles vs eta ($\Delta\phi < 1.5$)

CKIN(3)=10

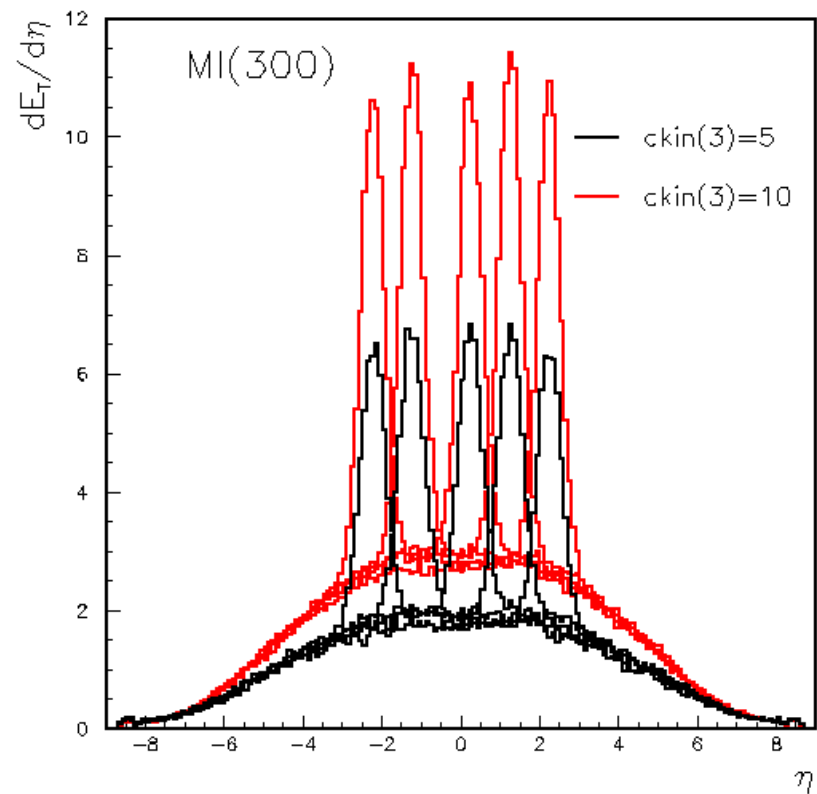
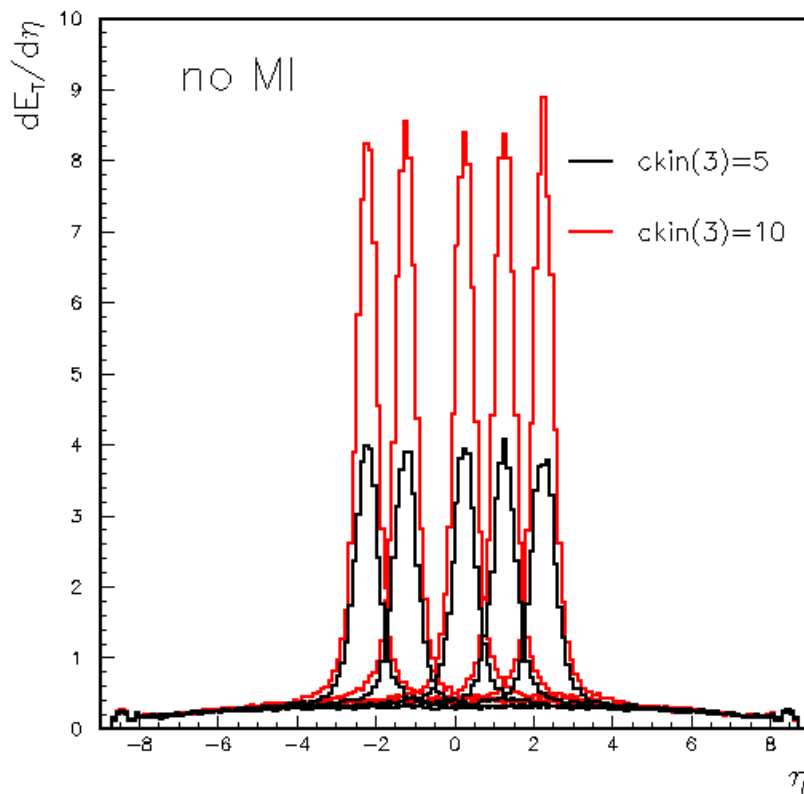


Jet profiles vs ϕ ($\Delta\eta < 2$) and
Et 'profile' for $3.5 < \eta < 7.5$

CKIN(3)=10



Jet profiles: different η_{jets}



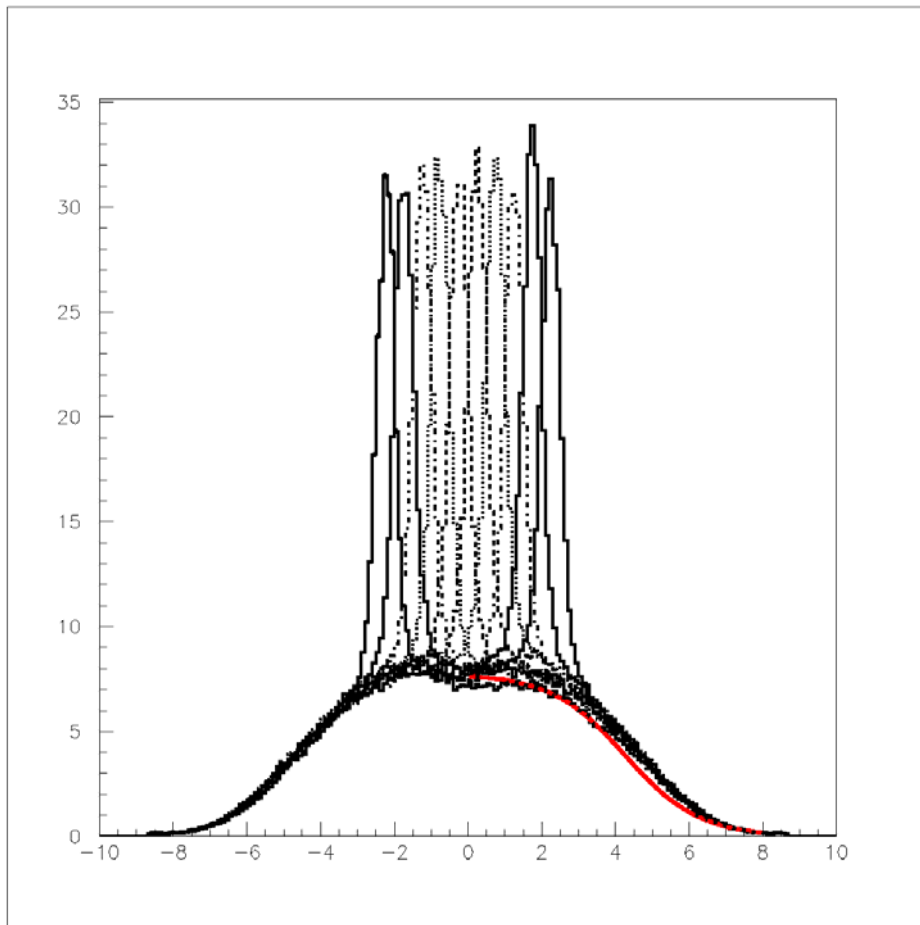
no MI $\rightarrow$ no pedestals

MI $\rightarrow$ pedestal independent on $\eta_{\text{jets}} \rightarrow$ measurements in CASTOR region may help to subtract pedestal

the 'underlying event' is independent on $\eta_{\text{jet}} \rightarrow$

can the measurement at CASTOR help to subtract pedestal and get clean jet E_t ?

Try to fit all pedestals by a unique function with 1 free parameter



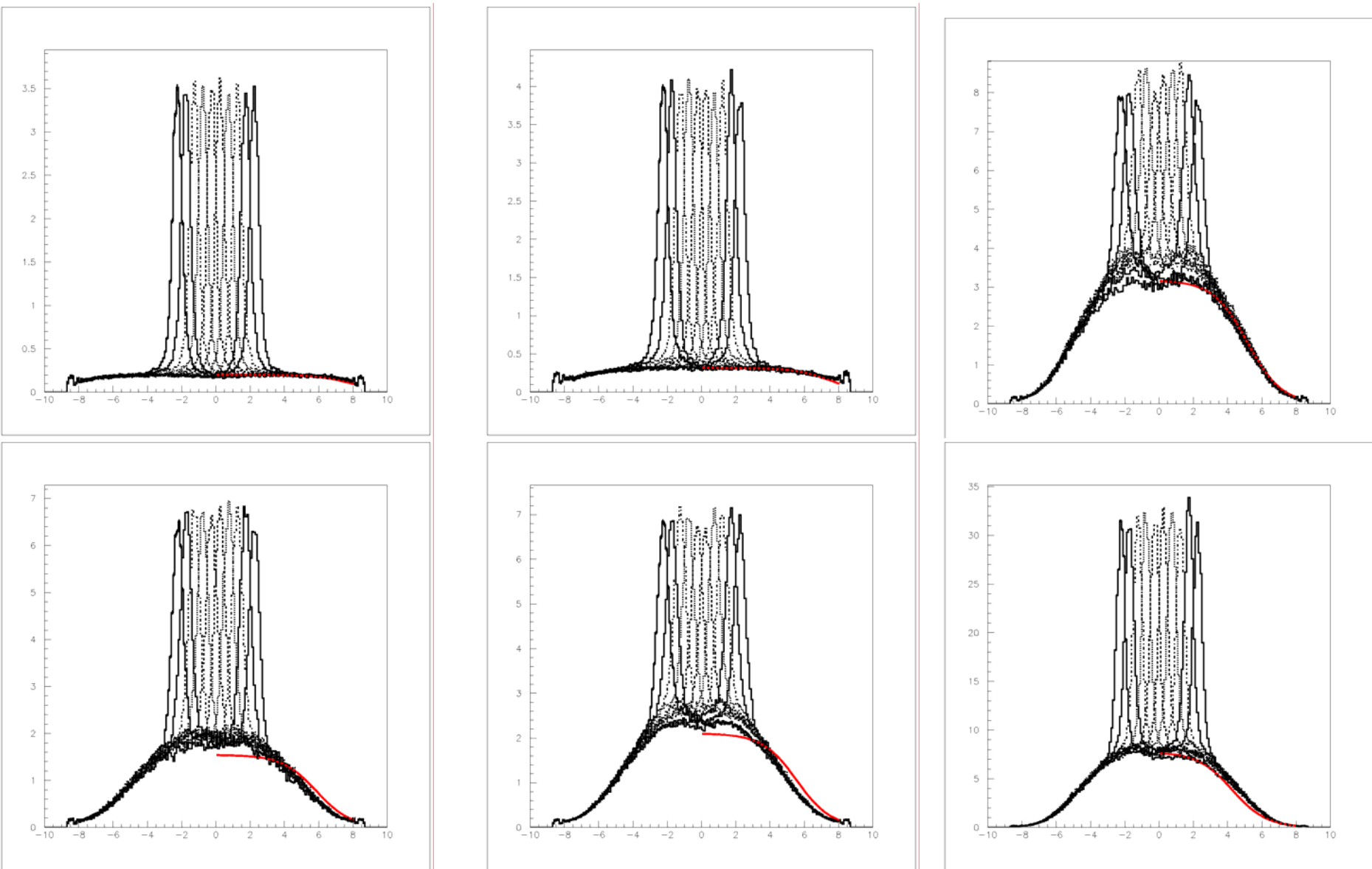
$$f(\eta) = \frac{A}{1 + B \cdot e^{|\eta|-4}}$$

in principle, A and B are correlated
($B \sim 0.1 \cdot A$) $\rightarrow$

$$f(\eta) = \frac{A}{1 + 0.1 \cdot A \cdot e^{|\eta|-4}}$$

Jet profiles vs η for different η_{jet} (different CKIN(3) cuts, i.e. different jet E_t)

Result of the fit for different MI options



$$f(\eta) = \frac{A}{1 + 0.1 \cdot A \cdot e^{|\eta|-4}}$$

-parameter A defined from the energy in 'Castor' ($5.2 < \eta < 6.6$)

