Event Selection

- selection as M. Dittmar and H. Dreiner, hep-ph/9608317

- selection of events with
  - two (isolated) leptons/muons with opposite charge, $p_T > 20/10\ GeV$, and $|\eta| < 2$
  - missing $E_T > 20\ GeV$ (here calculated from $\mu^\pm$ momenta)
  - jet veto is not applied in this study
  - more $\mu^\pm$ cuts: $m_{inv}(\mu^+, \mu^-) < 80\ GeV$ and $\Delta\phi(\mu^+, \mu^-) < 2.4$

- treatment of W bosons
  - plot 4momenta of $W^\pm$ (experimentally not accessible)
  - $W_1^\pm$ decays to the $\mu^\pm$ with the highest p_T ($W_2^\pm$ to 2nd $\mu^\pm$)

- plot kinematic distributions normalized to unit area

NLO Re-weighting Method

◇ apply method described by G. Davatz et al., hep-ph/0402218

◇ description

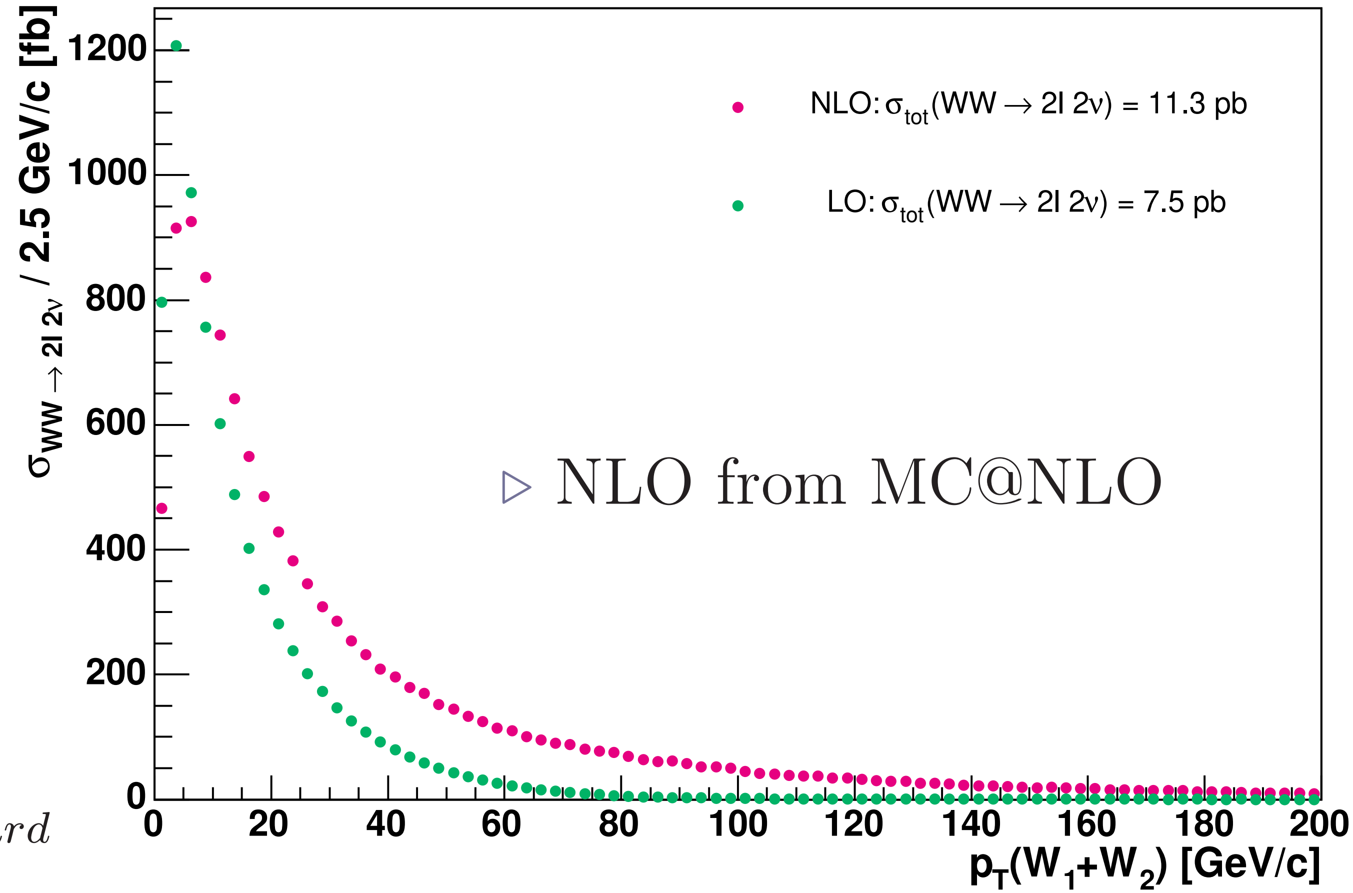
▷ $\sigma_{NLO}(p_T^{hard})$

▷ $\sigma_{MC}(p_T^{hard})$

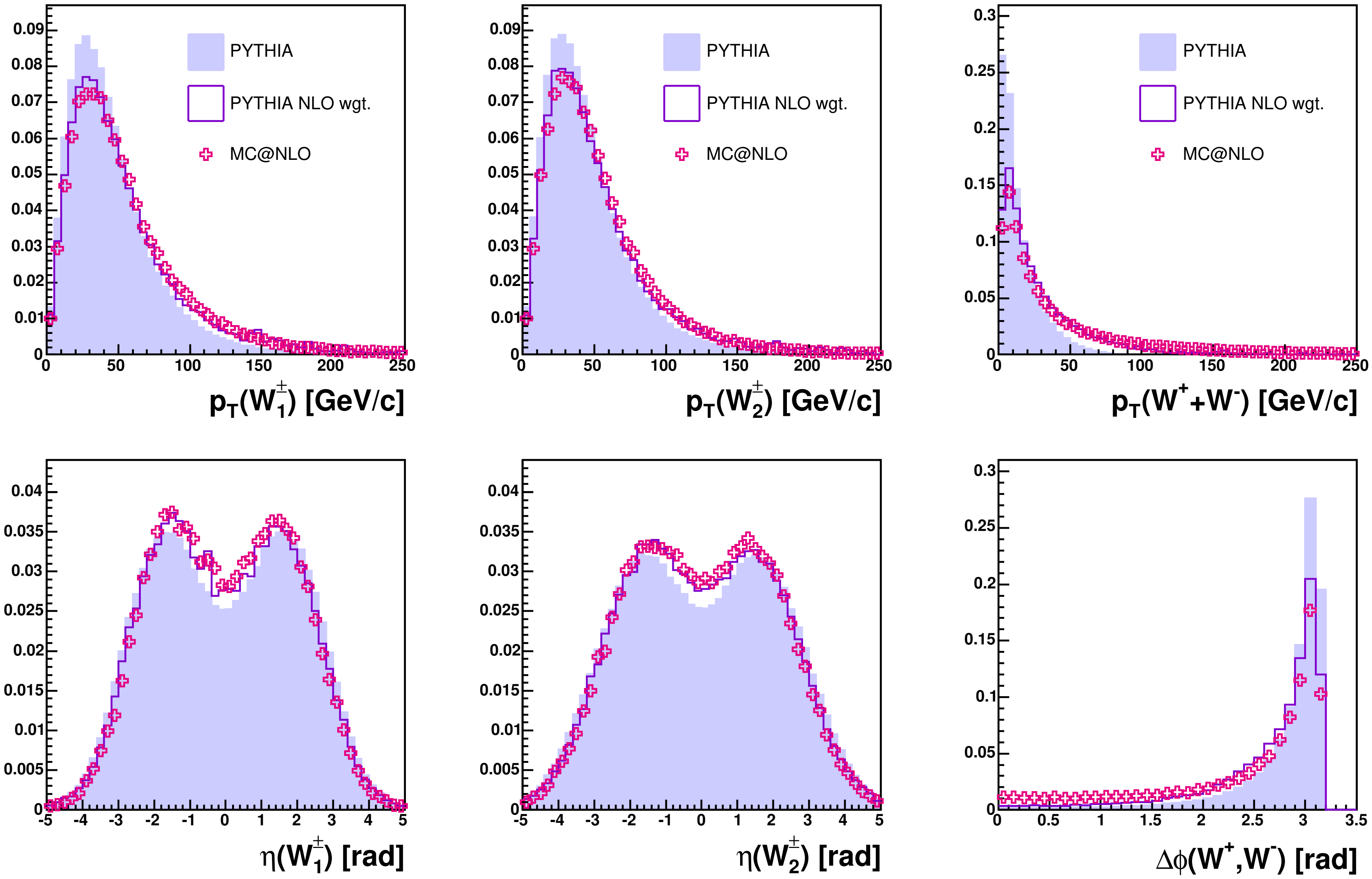
▷ $k = k(p_T^{hard})$

$$= \frac{\sigma_{NLO}(p_T^{hard})}{\sigma_{MC}(p_T^{hard})}$$

▷ re-weight each event as a function of p_T^{hard}



PYTHIA (MC@NLO weighted) - MC@NLO



PYTHIA (MC@NLO weighted) - MC@NLO