



A proposal for  
combined QCD studies H1/ATLAS

---

- H1
  - Started 1992, completed data taking this year
  - Well understood detector reconstruction (jet energy systematics  $\sim 1\%$ )
  - Lots of unanalyzed data
- ATLAS
  - About to start from 2008
  - First year(s) will be devoted to understand detector, beam condition,...
  - First measurement(s) will be on QCD (jets)
  - Lots of data to come

# Example

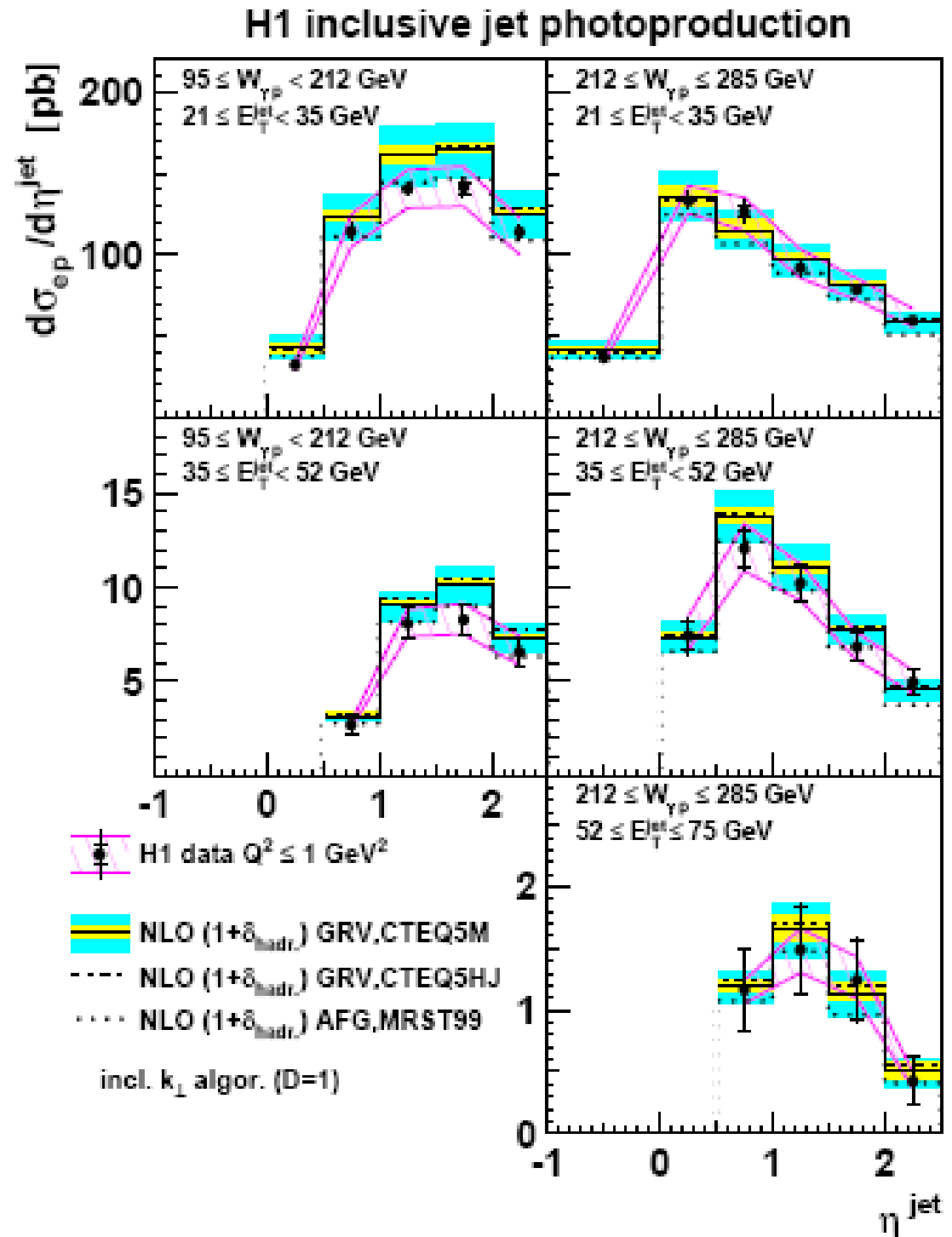
## Inclusive jet cross section measurement (2003)

### H1

- Data up to 1997 ( $L = 24 \text{ pb}^{-1}$ ). Full data set:  $L \times O(10)$
- Dominant systematics: jet energy scale 2 % (high  $E_T$ ) to 4% (low  $E_T$ )  
→ now reduced to  $\sim 1\%$
- New measurement could help reduce uncertainty on PDF

### ATLAS

- One of the first “classical” measurements at hadron colliders
- Understand jet corrections, both experimental (detector  $\rightarrow$  particle) and theoretical (parton  $\rightarrow$  particle)



This document was created with Win2PDF available at <http://www.daneprairie.com>.  
The unregistered version of Win2PDF is for evaluation or non-commercial use only.