

data / theory

inclusive jet production

in hadron-induced processes

fastNLO

<http://projects.hepforge.org/fastnlo> 10^4 10^3 10^2 10 1 10^{-1} $\sqrt{s} = 300 \text{ GeV}$ $\sqrt{s} = 318 \text{ GeV}$ $\sqrt{s} = 546 \text{ GeV}$ $\sqrt{s} = 630 \text{ GeV}$ $\sqrt{s} = 1.8 \text{ TeV}$ $\sqrt{s} = 1.96 \text{ TeV}$ $\sqrt{s} = 7 \text{ TeV}$

all pQCD calculations using NLOJET++ with fastNLO:

 $\alpha_s(M_Z)=0.118$

CT10 PDFs

 $\mu_r = \mu_f = p_{T \text{ jet}}$

NLO plus non-perturbative corrections

pp, pp̄: incl. threshold corrections (2-loop)

 $\sqrt{s} = 200 \text{ GeV}$

pp

• STAR cone $0.2 < |\eta| < 0.8$ $(\times 4000)$ $(\times 500)$ $(\times 200)$ $(\times 80)$ $(\times 25)$ $(\times 10)$ $(\times 4)$ $(\times 1)$

DIS

pp-bar

pp

 10 10^2 10^3 $p_T \text{ (GeV/c)}$

• H1 k_T Q^2 : from 150 to 5000 GeV²
 • ZEUS k_T Q^2 : from 125 to 5000 GeV²
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