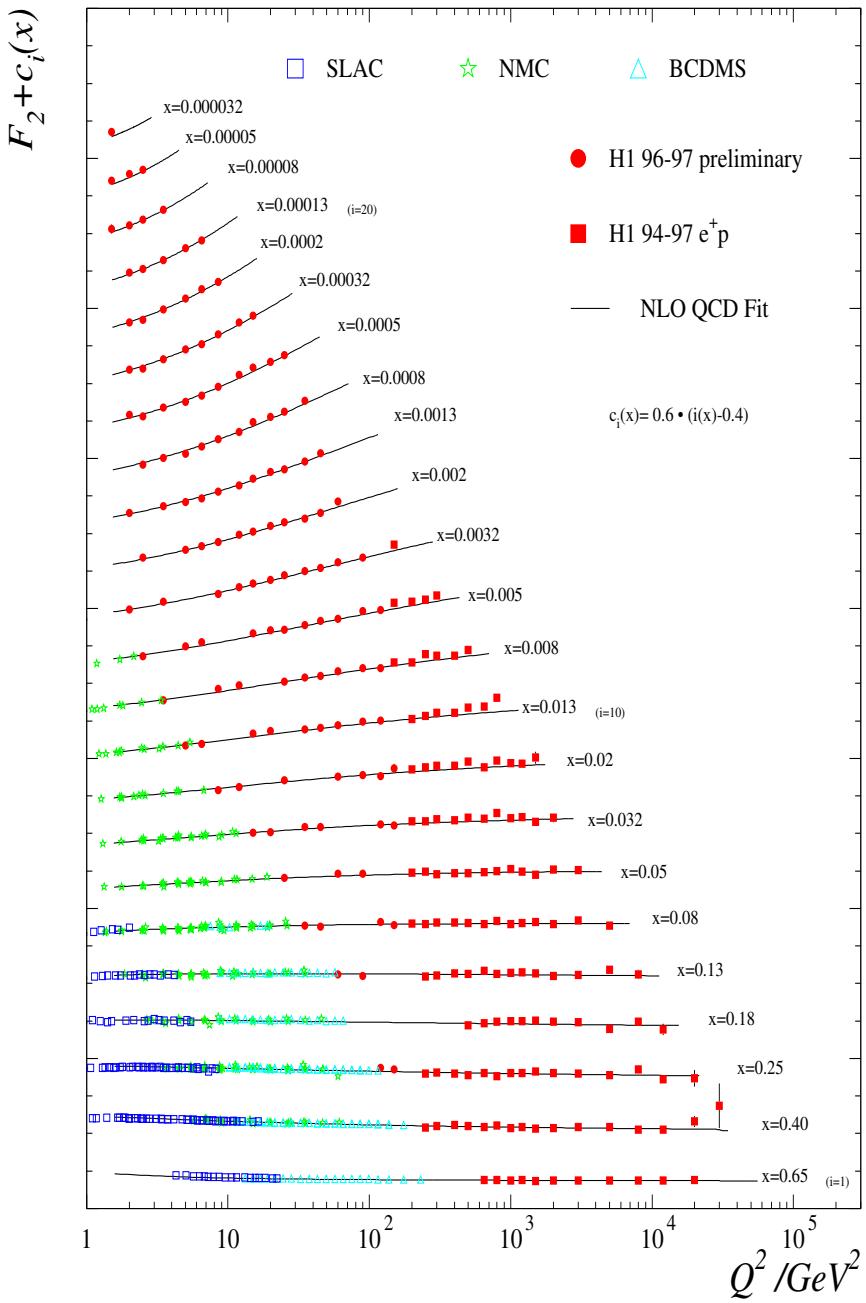
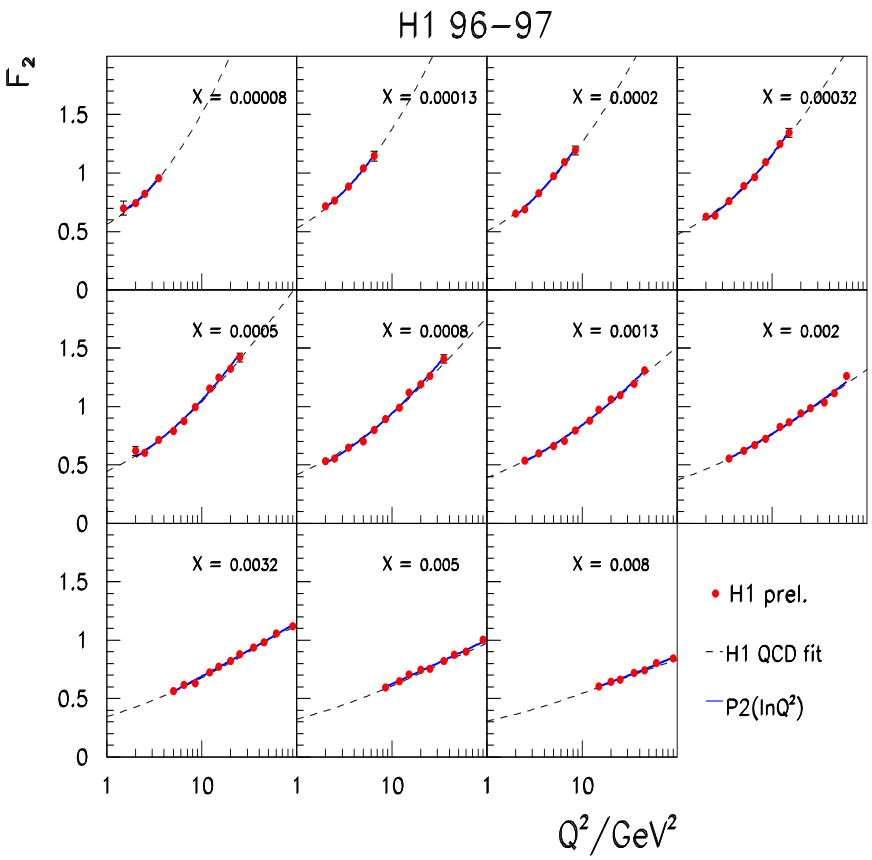
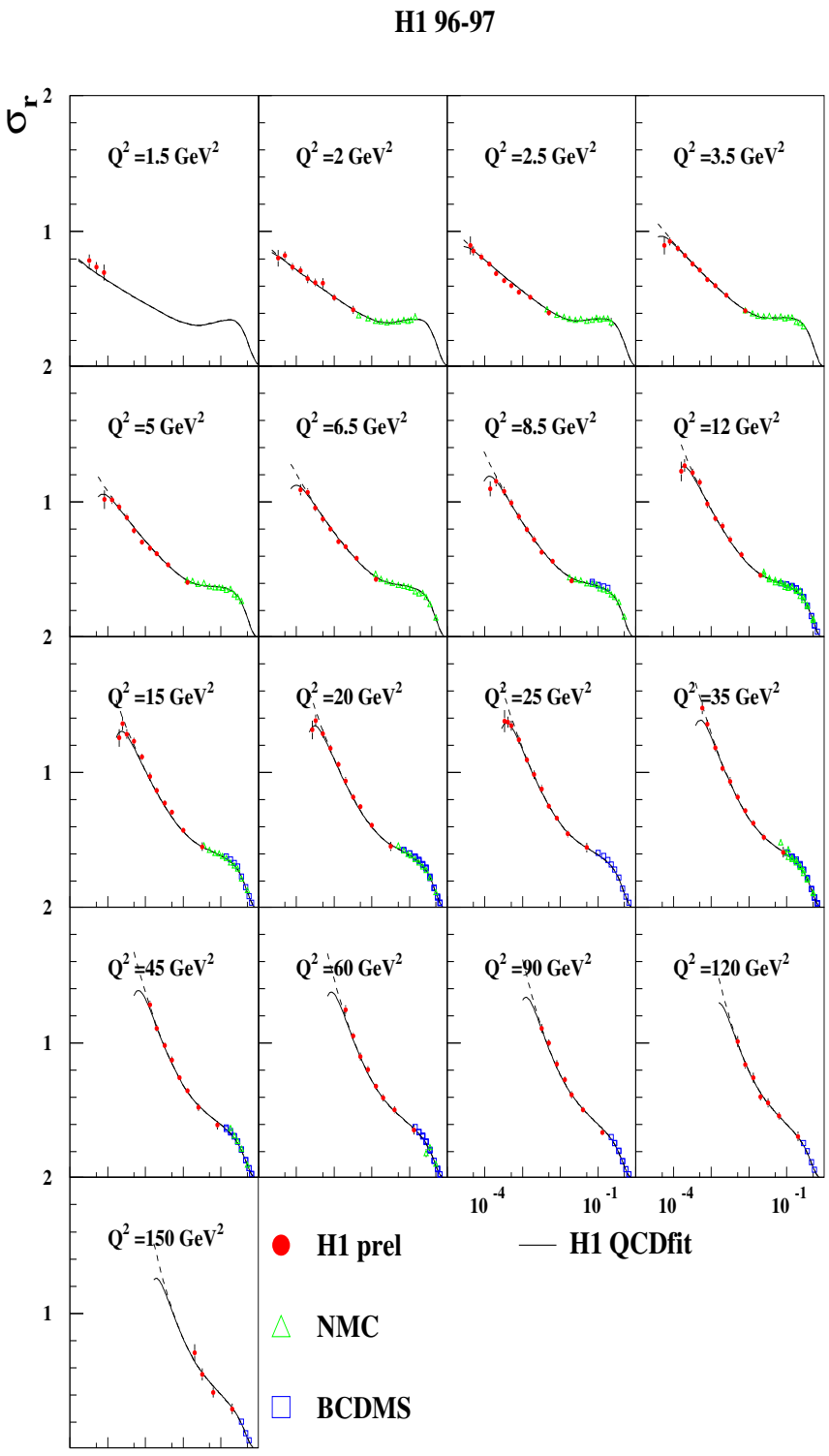
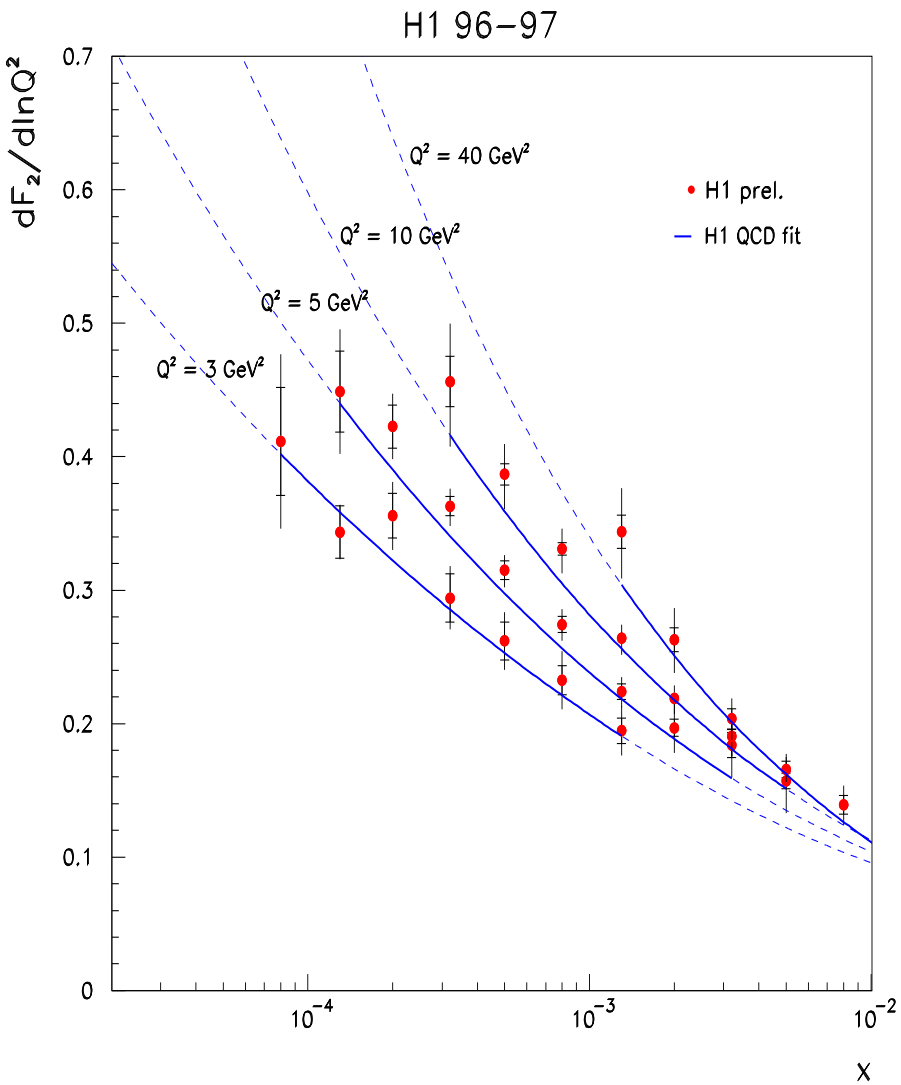
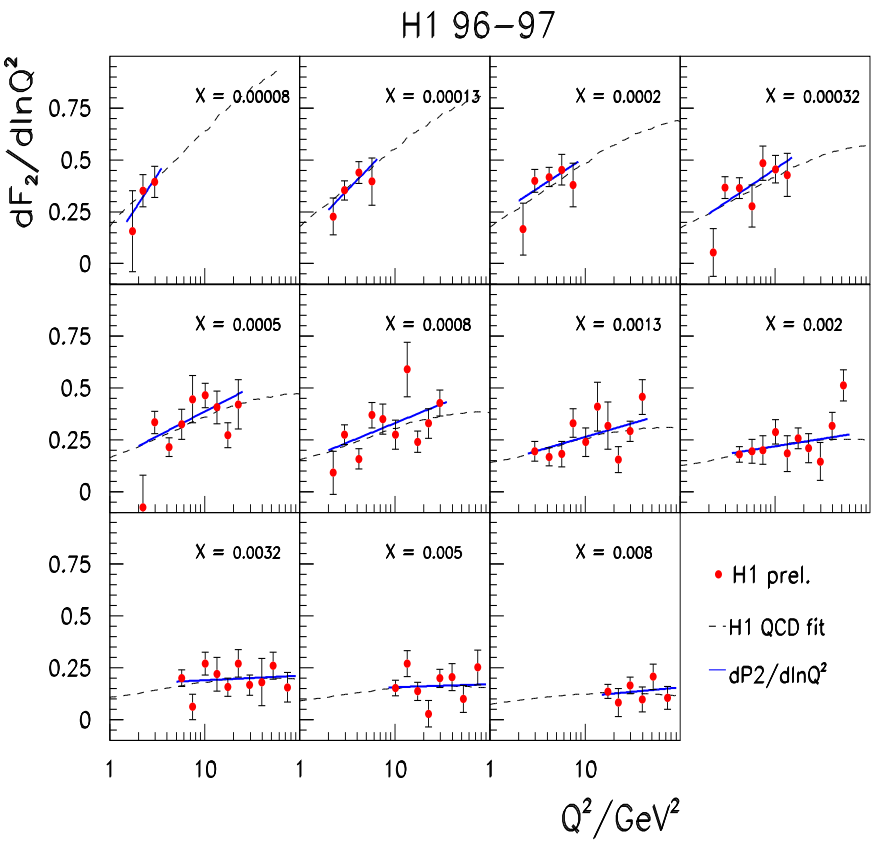
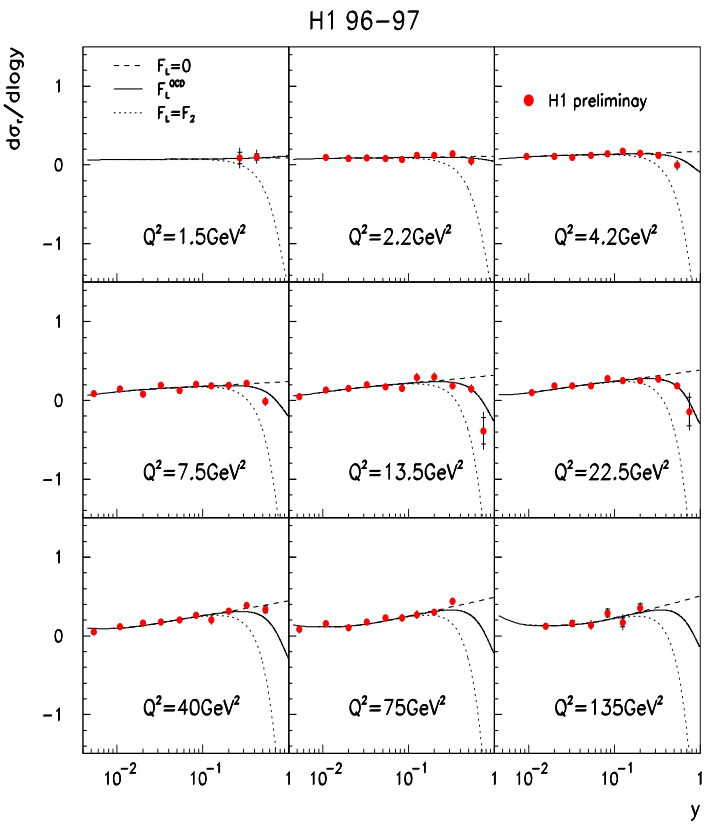

$F_2 + c_i(x)$
SLAC
NMC
BCDMS
H1 96-97 preliminary
H1 94-97 e^+p
NLO QCD Fit
$c_i(x) = 0.6 \cdot (i(x)-0.4)$
x=0.000032
x=0.00005
x=0.00008
x=0.00013 (i=20)
x=0.0002
x=0.00032
x=0.0005
x=0.0008
x=0.0013
x=0.002
x=0.0032
x=0.005
x=0.008
x=0.013 (i=10)
x=0.02
x=0.032
x=0.05
x=0.08
x=0.13
x=0.18
x=0.25
x=0.40
x=0.65 (i=1)
1
10
10^2
10^3
10^4
10^5
Q^2 /GeV^2

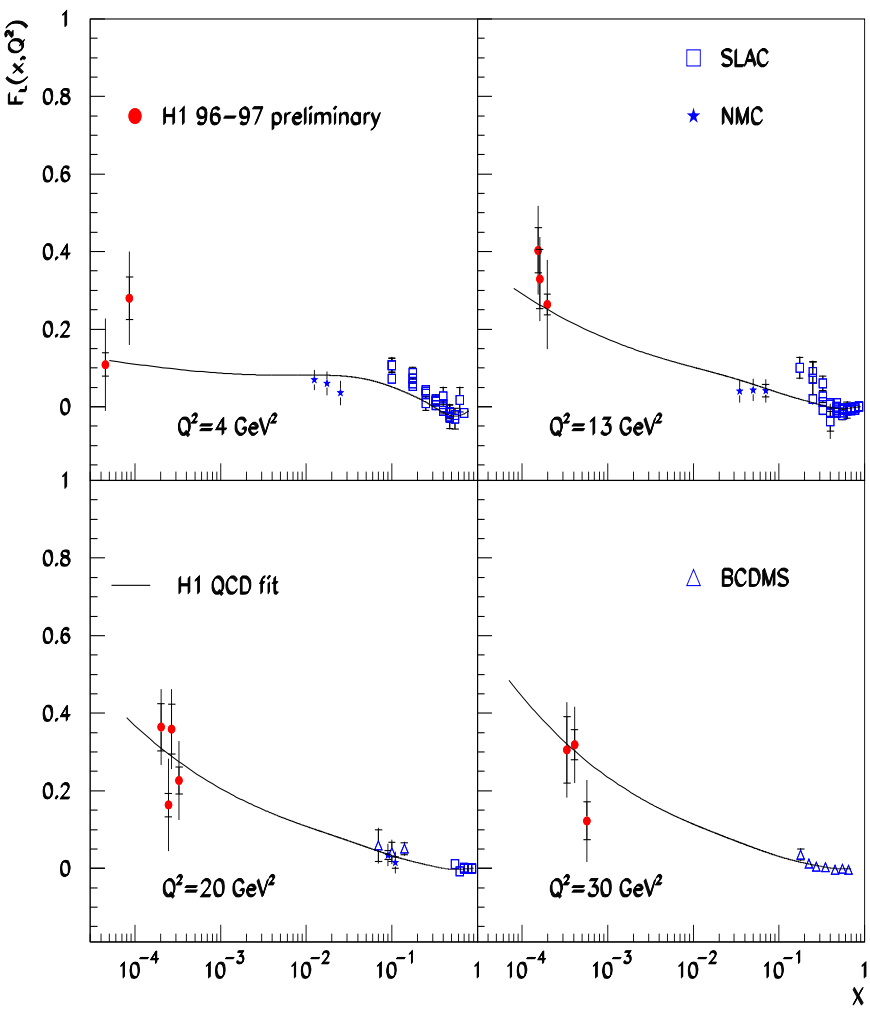

H1 96–97
F_2
X = 0.00008
X = 0.00013
X = 0.0002
X = 0.00032
X = 0.0005
X = 0.0008
X = 0.0013
X = 0.002
X = 0.0032
X = 0.005
X = 0.008
H1 prel.
H1 QCD fit
P2(lnQ²)
Q^2/GeV^2

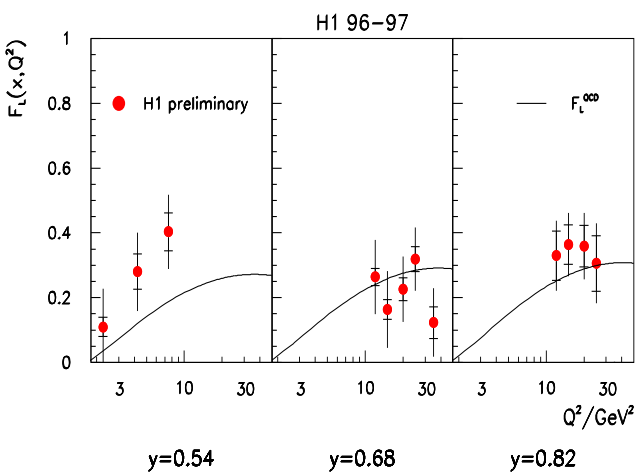

H1 96-97
σ_r
Q^2 =1.5 GeV^2
Q^2 =2 GeV^2
Q^2 =2.5 GeV^2
Q^2 =3.5 GeV^2
Q^2 =5 GeV^2
Q^2 =6.5 GeV^2
Q^2 =8.5 GeV^2
Q^2 =12 GeV^2
Q^2 =15 GeV^2
Q^2 =20 GeV^2
Q^2 =25 GeV^2
Q^2 =35 GeV^2
Q^2 =45 GeV^2
Q^2 =60 GeV^2
Q^2 =90 GeV^2
Q^2 =120 GeV^2
Q^2 =150 GeV^2
2
1
10^{-4}
10^{-1}
H1 prel
H1 QCDfit
NMC
BCDMS
X

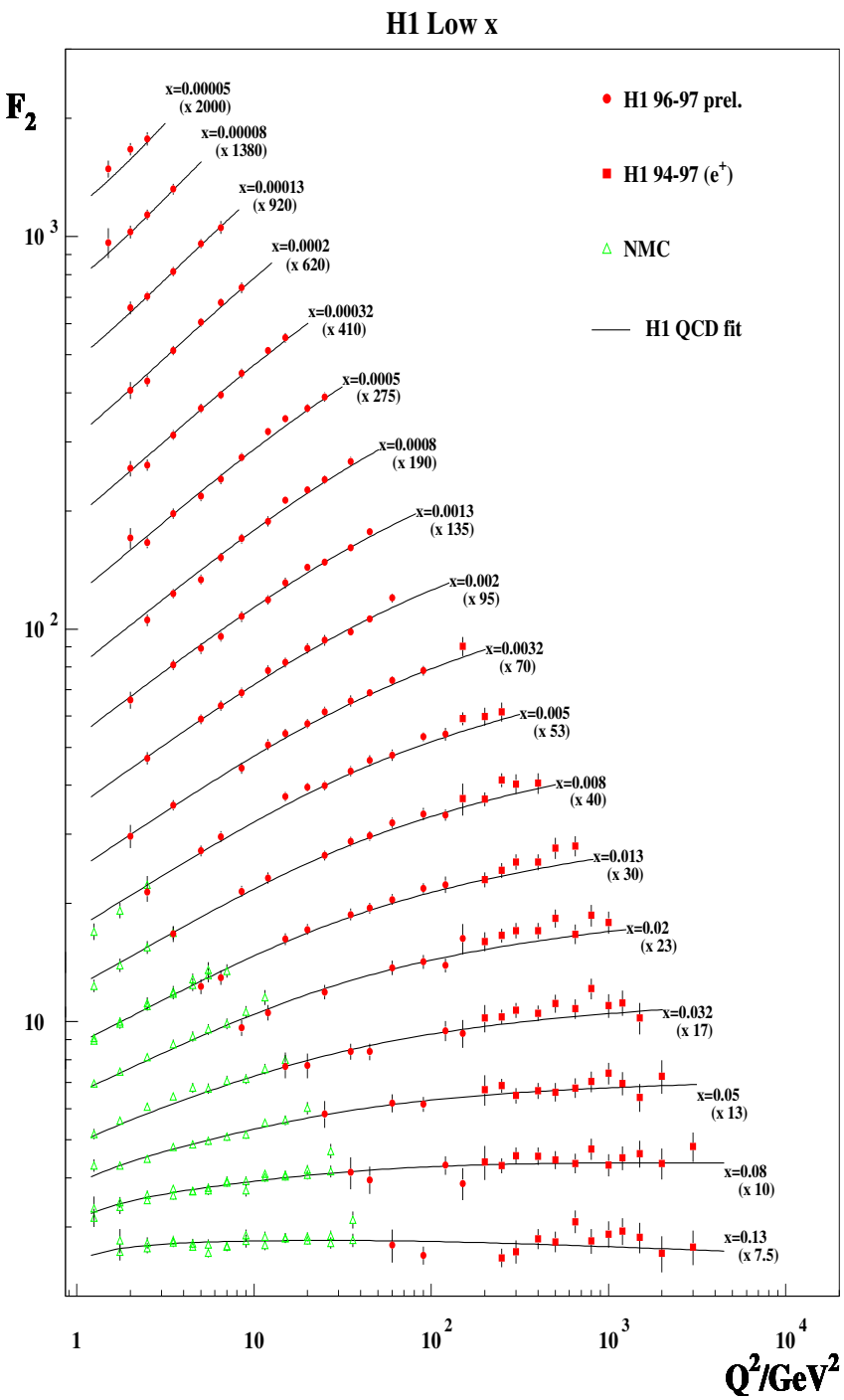

H1 96–97
$dF_2/d\ln Q^2$
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Q^2 = 40 GeV^2
Q^2 = 10 GeV^2
Q^2 = 5 GeV^2
Q^2 = 3 GeV^2
H1 prel.
H1 QCD fit
10^{-4}
10^{-3}
10^{-2}
x

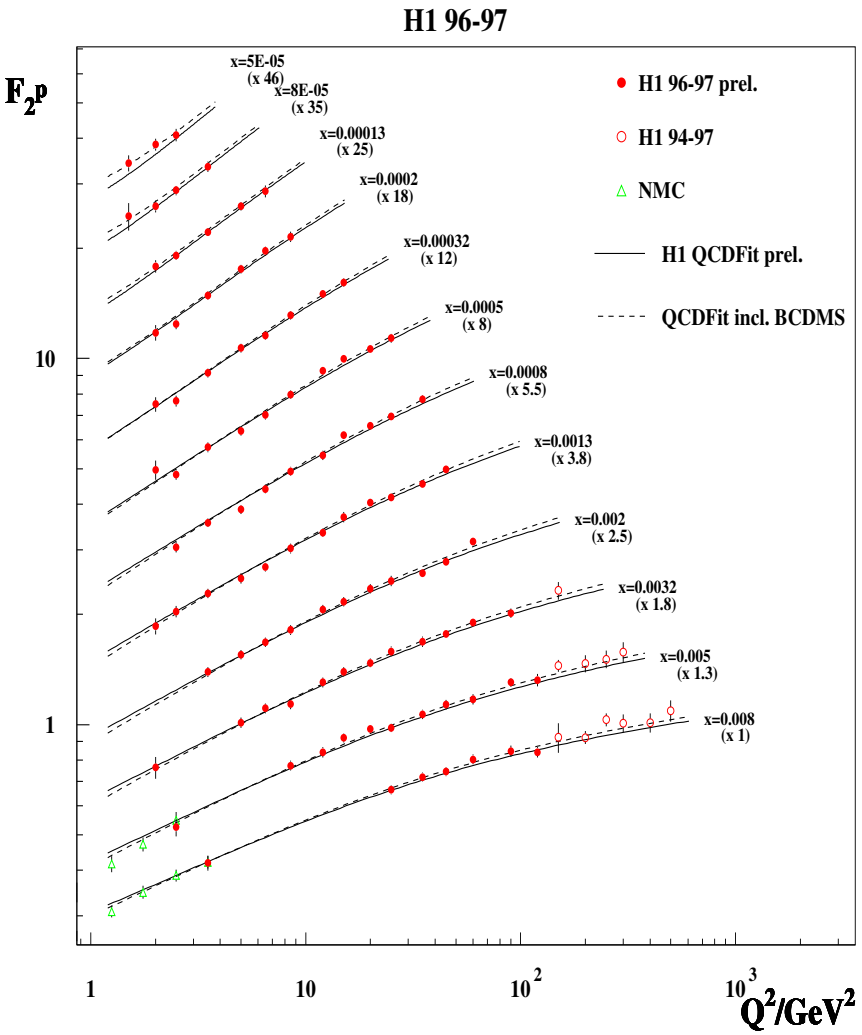

H1 96–97
dF2/dlnQ2
X = 0.00008
X = 0.00013
X = 0.0002
X = 0.00032
X = 0.0005
X = 0.0008
X = 0.0013
X = 0.002
X = 0.0032
X = 0.005
X = 0.008
0.75
0.5
0.25
0
1
10
Q2/GeV2
H1 prel.
H1 QCD fit
dP2/dlnQ2

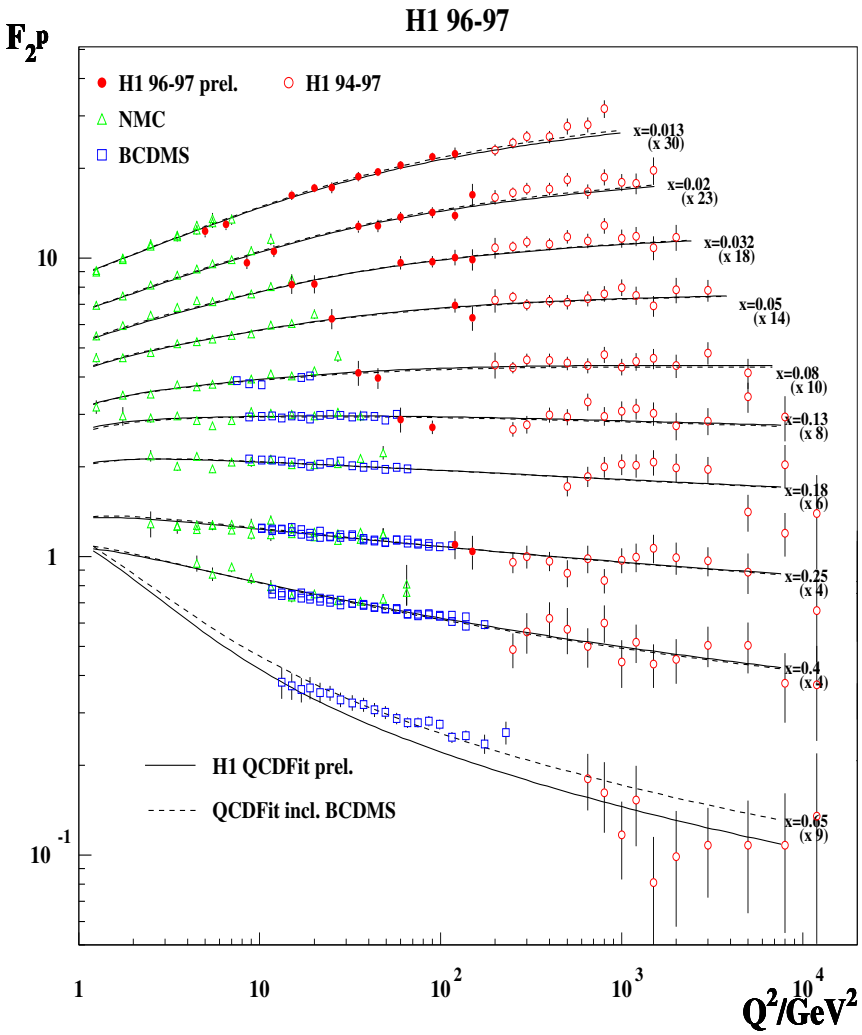

H1 96–97
$d\sigma_r/d\log y$
$F_L=0$
F_L^{QCD}
$F_L=F_2$
H1 preliminay
Q^2=1.5GeV^2
Q^2=2.2GeV^2
Q^2=4.2GeV^2
Q^2=7.5GeV^2
Q^2=13.5GeV^2
Q^2=22.5GeV^2
Q^2=40GeV^2
Q^2=75GeV^2
Q^2=135GeV^2
1
0
−1
10^{-2}
10^{-1}
y

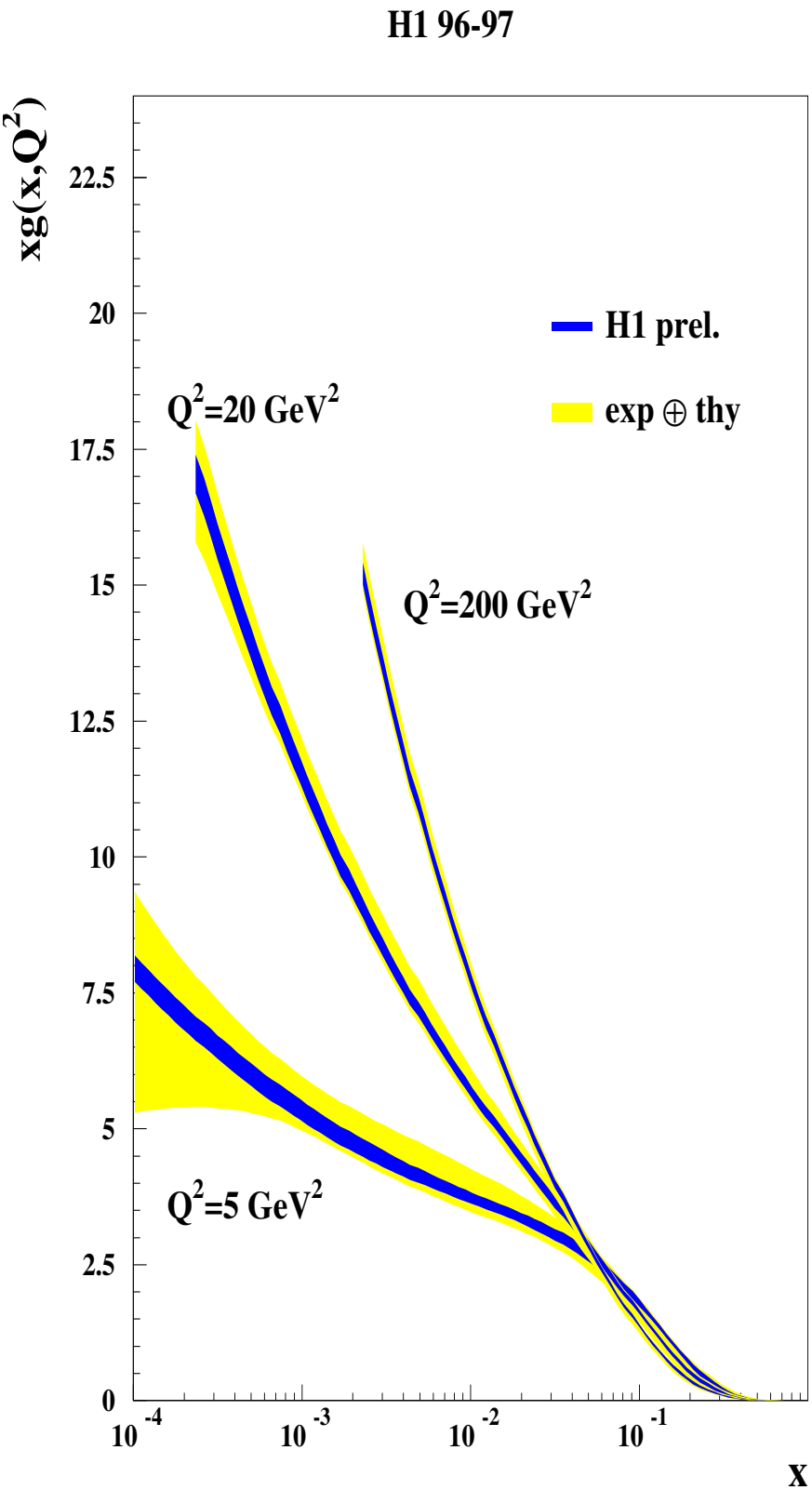

$F_L(x,Q^2)$
H1 96–97 preliminary
H1 QCD fit
SLAC
NMC
BCDMS
Q^2=4 GeV^2
Q^2=13 GeV^2
Q^2=20 GeV^2
Q^2=30 GeV^2
X


H1 96-97
$F_L(x,Q^2)$
H1 preliminary
F_L^{QCD}
1
0.8
0.6
0.4
0.2
0
3
10
30
Q^2/GeV^2
y=0.54
y=0.68
y=0.82


H1 Low x
F2
H1 96-97 prel.
H1 94-97 (e+)
NMC
H1 QCD fit
x=0.00005 (x 2000)
x=0.00008 (x 1380)
x=0.00013 (x 920)
x=0.0002 (x 620)
x=0.00032 (x 410)
x=0.0005 (x 275)
x=0.0008 (x 190)
x=0.0013 (x 135)
x=0.002 (x 95)
x=0.0032 (x 70)
x=0.005 (x 53)
x=0.008 (x 40)
x=0.013 (x 30)
x=0.02 (x 23)
x=0.032 (x 17)
x=0.05 (x 13)
x=0.08 (x 10)
x=0.13 (x 7.5)
10 3
10 2
10
1
10
10 2
10 3
10 4
Q2/GeV2


H1 96-97
F_2^p
x=5E-05
(x 46)
x=8E-05
(x 35)
x=0.00013
(x 25)
x=0.0002
(x 18)
x=0.00032
(x 12)
x=0.0005
(x 8)
x=0.0008
(x 5.5)
x=0.0013
(x 3.8)
x=0.002
(x 2.5)
x=0.0032
(x 1.8)
x=0.005
(x 1.3)
x=0.008
(x 1)
H1 96-97 prel.
H1 94-97
NMC
H1 QCDFit prel.
QCDFit incl. BCDMS
10
1
1
10
10^2
10^3
Q^2/GeV^2


H1 96-97
F_2^p
H1 96-97 prel.
H1 94-97
NMC
BCDMS
x=0.013 (x 30)
x=0.02 (x 23)
x=0.032 (x 18)
x=0.05 (x 14)
x=0.08 (x 10)
x=0.13 (x 8)
x=0.18 (x 6)
x=0.25 (x 4)
x=0.4 (x 2)
x=0.65 (x 1)
H1 QCDFit prel.
QCDFit incl. BCDMS
10
1
10^{-1}
1
10
10^2
10^3
10^4
Q^2/GeV^2


H1 96-97
xg(x,Q²)
22.5
20
17.5
15
12.5
10
7.5
5
2.5
0
H1 prel.
exp ⊕ thy
Q²=20 GeV²
Q²=200 GeV²
Q²=5 GeV²
10⁻⁴
10⁻³
10⁻²
10⁻¹
x