Statistical and Systematic Uncertainties in the yellow report

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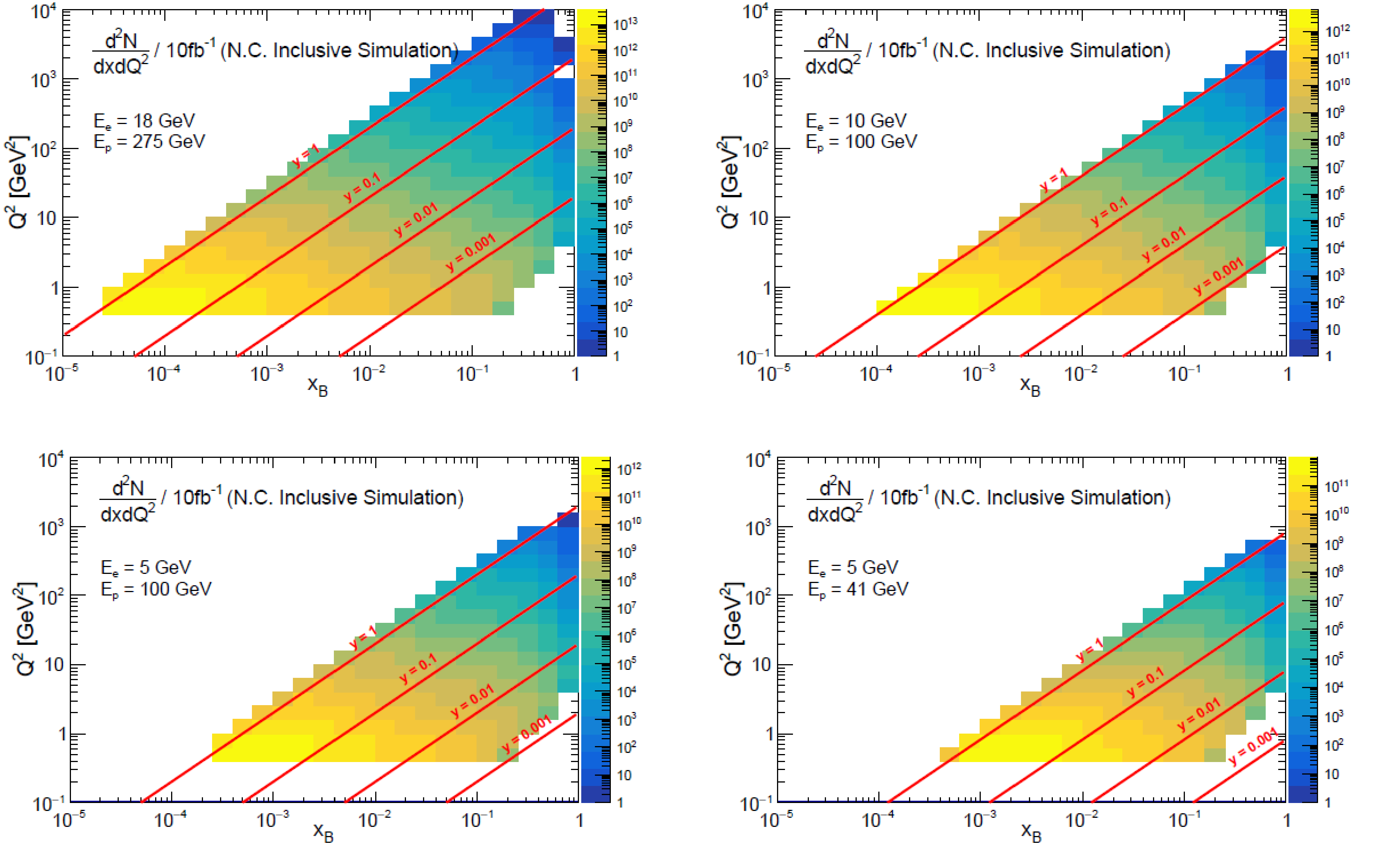
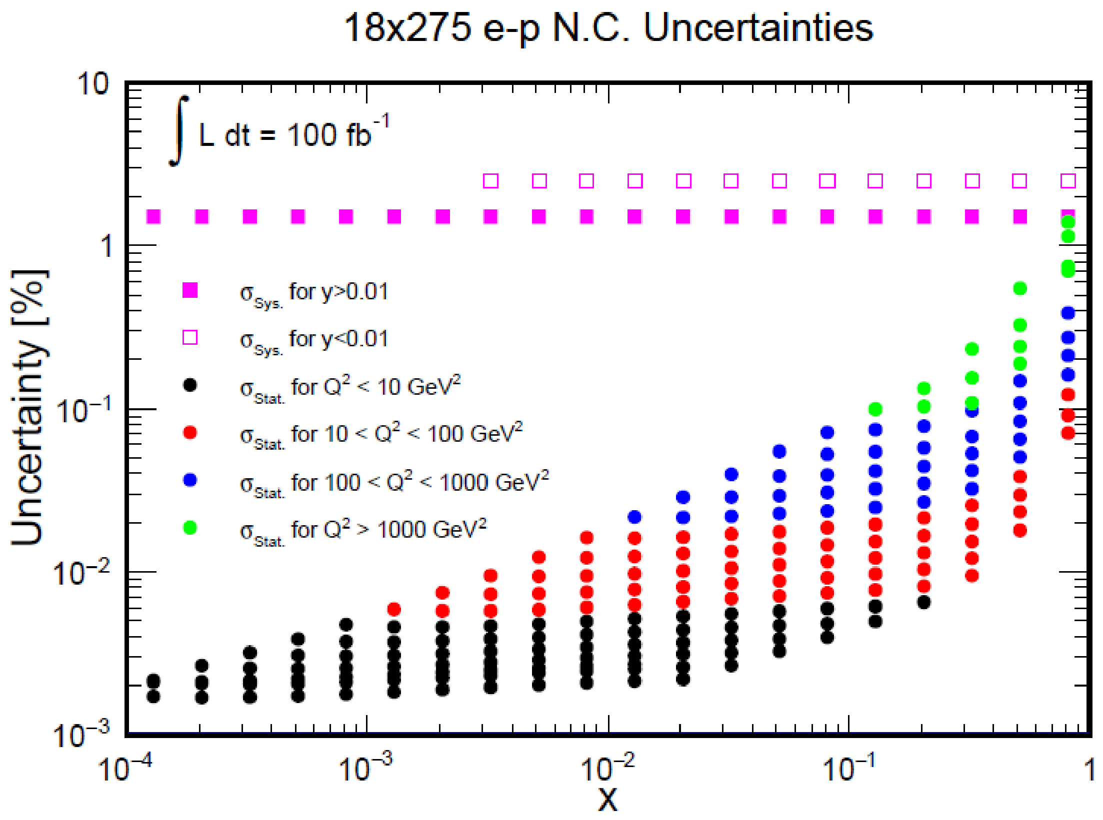
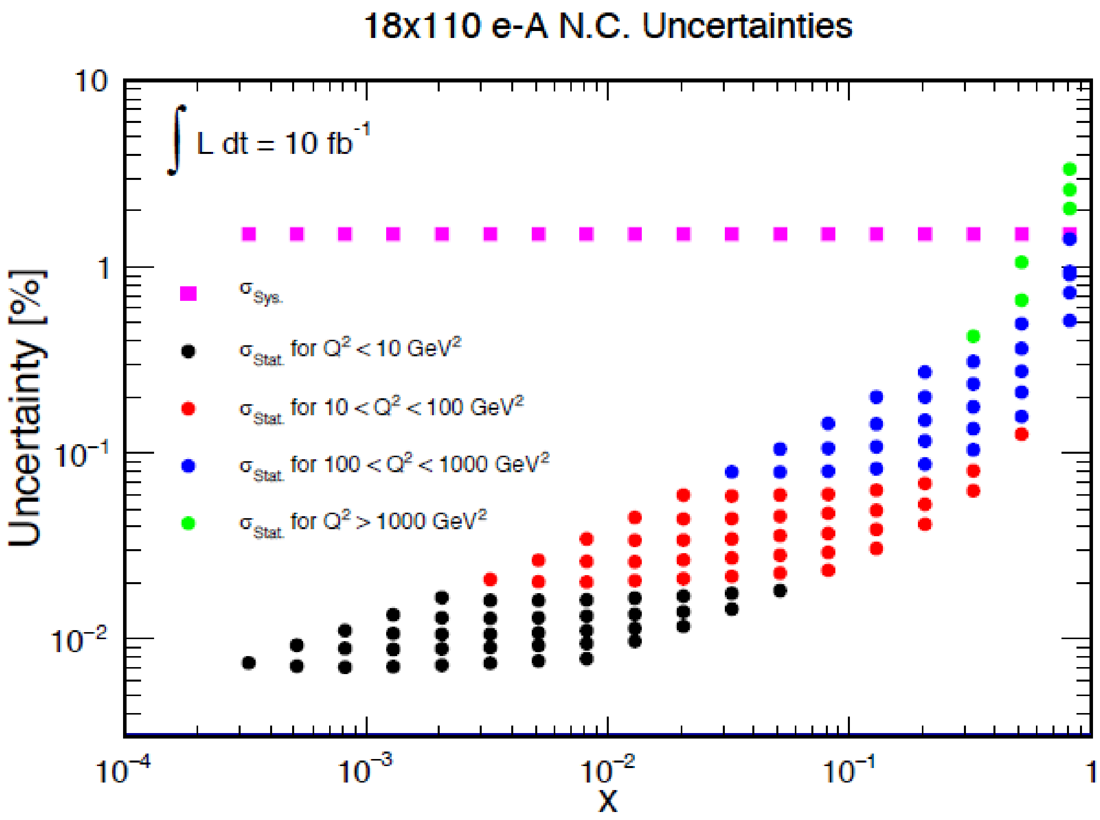
N.C. kinematic coverage and binning



Estimated uncertainties for N.C. Cross sections

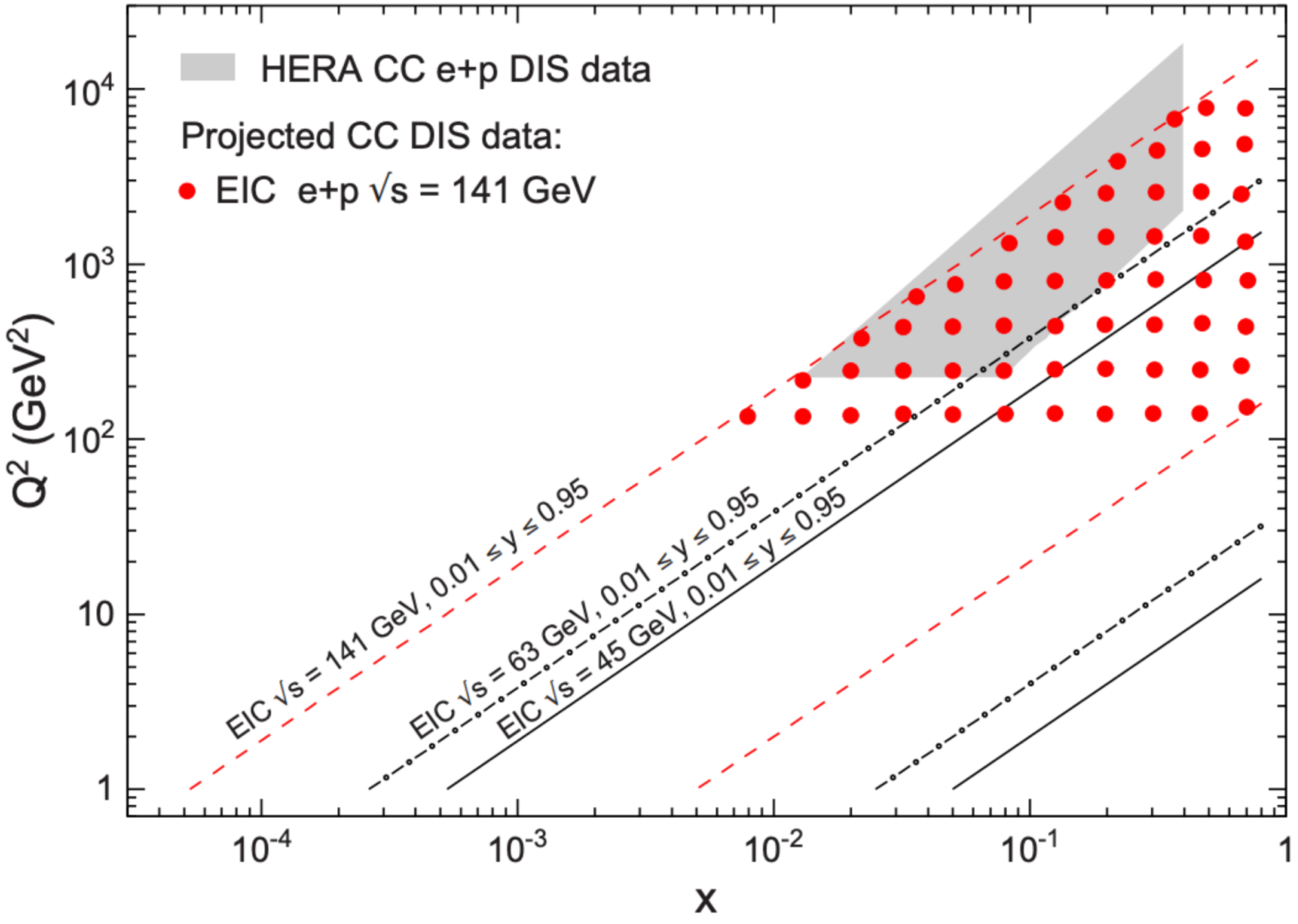




N.C. systematic uncertainties

	Point-to-Point (%)	**Normalization (%)**
Statistics (10 fb^{-1})	0.01-0.35	-
Luminosity	-	~1
Electron Purity	-	~1 (for 90% purity)
Bin-Centering	<0.5	<0.5
Radiative Corrections (*HERA*)	1	-
Acceptance / Bin-Migration + Trigger & Tracking Eff. + Charge-Symmetric Background	1-2	2-4
Additional uncertainty for y<0.01 bins	2	-
Total	1.5-2.3 (2.5-3 for y<0.01)	2.5-4.3

C.C. kinematic coverage and binning

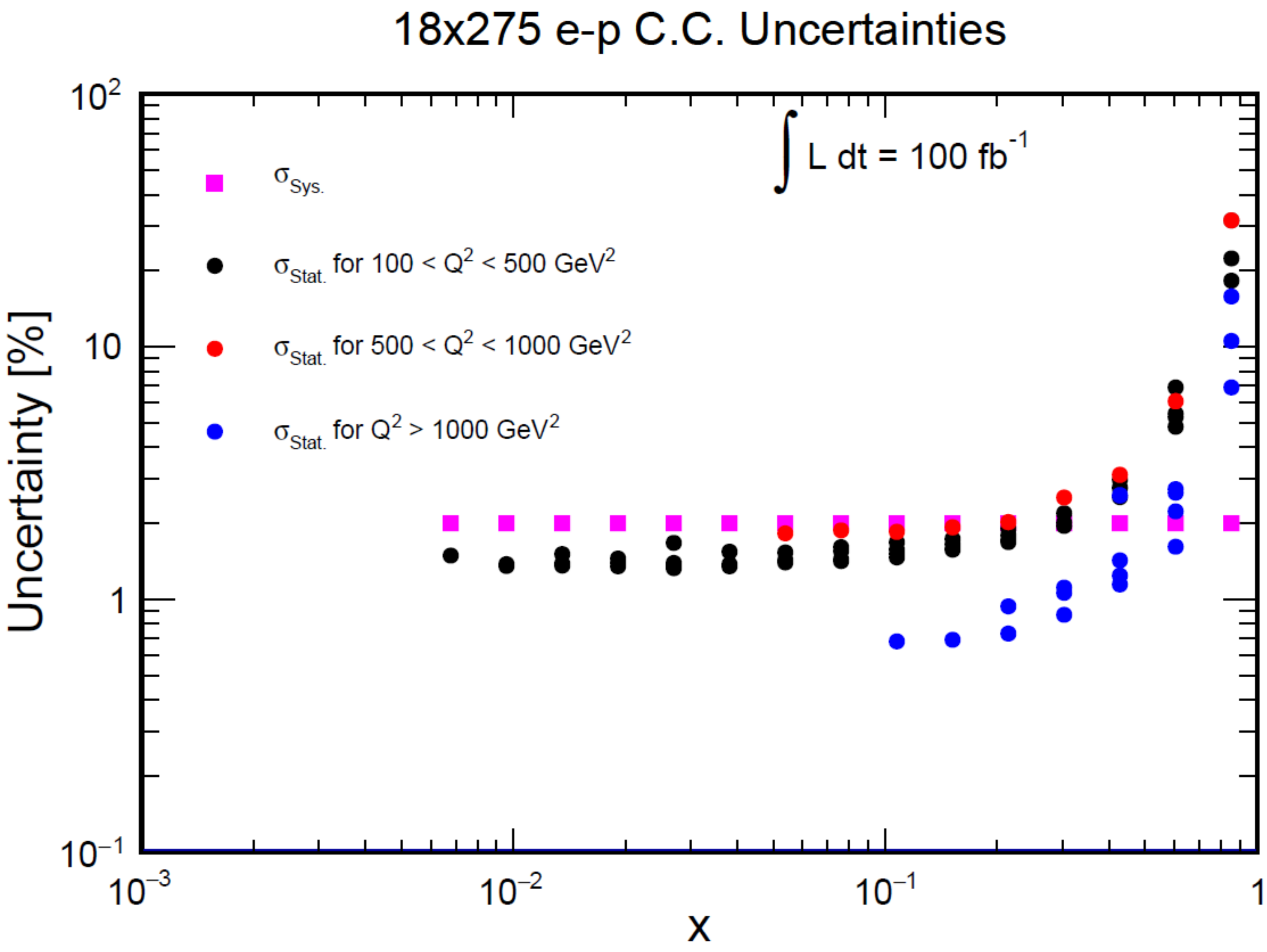


$$Q^2_{JB} = \frac{p_T^2}{1 - y_{JB}}$$

$$y_{JB} = \frac{(E - p^z)}{2E}$$

$$x_{JB} = \frac{Q^2_{JB}}{s y_{JB}}$$

Estimated uncertainties for C.C. Cross sections



Minimum bias simulation data available from the yellow report effort

Data Set	Generator	Beam Energies	Run Information	Number of Events	Int. Luminosity
1	Pythia6	5x41 GeV e-p	$Q^2 > 0.5$ GeV^2; NC unpolarized; QED Radiation OFF	100 million	0.14 fb^{-1}
2	Pythia6	5x41 GeV e-p	$Q^2 > 3.0$ GeV^2; NC unpolarized; QED Radiation OFF	100 million	0.96 fb^{-1}
3	Pythia6	5x100 GeV e-p	$Q^2 > 0.5$ GeV^2; NC unpolarized; QED Radiation OFF	15 million	0.016 fb^{-1}
4	Pythia6	10x100 GeV e-p	$Q^2 > 0.5$ GeV^2; NC unpolarized; QED Radiation OFF	11 million	9.9e-3 fb^{-1}
5	Pythia6	10x110 GeV e-p	$Q^2 > 0.5$ GeV^2; NC unpolarized; QED Radiation OFF	15 million	0.013 fb^{-1}
6	Pythia6	18x110 GeV e-p	$Q^2 > 0.5$ GeV^2; NC unpolarized; QED Radiation OFF	15 million	0.011 fb^{-1}
7	Pythia6	18x275 GeV e-p	$Q^2 > 0.5$ GeV^2; NC unpolarized; QED Radiation OFF	15 million	9.0e-3 fb^{-1}
8	Pythia6	27.5x920 GeV e+p	$Q^2 > 1.5$ GeV^2; NC unpolarized; QED Radiation OFF	10 million	0.011 fb^{-1}
9	Djangoh	5x41 GeV e-p	$Q^2 > 0.5$ GeV^2; NC unpolarized; QED Radiation OFF	~10 million	0.014 fb^{-1}
10	Djangoh	5x100 GeV e-p	$Q^2 > 0.5$ GeV^2; NC unpolarized; QED Radiation OFF	~10 million	0.011 fb^{-1}
11	Djangoh	10x100 GeV e-p	$Q^2 > 0.5$ GeV^2; NC unpolarized; QED Radiation OFF	~10 million	9.1e-3 fb^{-1}
12	Djangoh	18x275 GeV e-p	$Q^2 > 0.5$ GeV^2; NC unpolarized; QED Radiation OFF	~10 million	6.6e-3 fb^{-1}
13	Djangoh	27.6x920 GeV e+p	$Q^2 > 1.5$ GeV^2; NC unpolarized; QED Radiation OFF	~2.5 million	3.5e-3 fb^{-1}
14	Pythia6	5x41 GeV e-p	Q^2 down to photo-production limit; NC unpolarized; QED Radiation OFF	500 million	6.3e-3 fb^{-1}
15	Pythia6	10x100 GeV e-p	Q^2 down to photo-production limit; NC unpolarized; QED Radiation OFF	300 million	2.3e-3 fb^{-1}
16	Pythia6	18x275 GeV e-p	Q^2 down to photo-production limit; NC unpolarized; QED Radiation OFF	300 million	1.7e-3 fb^{-1}
17	Djangoh	10x100 GeV e-p	$Q^2 > 0.5$ GeV^2; NC unpolarized; QED Radiation ON	~15 million	0.013 fb^{-1}

Kinematic limits in the generators

- *Pythia6* always applies a hard cut of $W > 2$ GeV; can go down to photo-production.
- *Djangoh* requires $Q^2 > 0.2$ GeV^2, and it always applies a hard cut of $W >$ ~3.38 GeV.
- Not sure about *pythia8*…