

Studies for nuclear FFs

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Implementation

Pythia8 April campaign: ep 10x100 GeV² , weighted at NLO with ratio of nNNPDF10_nlo_as_0118_Au197 x nFF24 (arXiv:2411.08222) and NNPDF30_nlo_as_0118 x pDSSV FF (arXiv:1702.06353)

Luminosity for p: 1 fb⁻¹ (cf. 9x130 table from last week)

Luminosity for Au: 1 fb⁻¹ (cf. 9x130 table from last week)

Statistical uncertainty: from reconstructed data.

Data points: generated data (if there are at least 50 hadrons reconstructed in a bin).

Systematic uncertainty:

Luminosity: 1.4%

Bin-by-bin systematic uncertainty of 3.5%.

Binning

x_B	1.0e-05	1.58489e-05	2.51189e-05	3.98107e-05	6.30957e-05
	1.0e-04	1.58489e-04	2.51189e-04	3.98107e-04	6.30957e-04
	1.0e-03	1.58489e-03	2.51189e-03	3.98107e-03	6.30957e-03
	1.0e-02	1.58489e-02	2.51189e-02	3.98107e-02	6.30957e-02
	1.0e-01	1.58489e-01	2.51189e-01	3.98107e-01	6.30957e-01
	1.0				
Q^2 [GeV ²]	1.0	1.77828	3.16228	5.62341	
	10.0	17.7828	31.6228	56.2341	
	100.0	177.828	316.228	562.341	
	1000.0	10000.0			
z	0.01	0.05	0.10	0.15	0.20
	0.25	0.30	0.40	0.50	0.60
	0.70	0.80	0.90	1.00	

Au cross section

