Updates of drawing tools

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HERAFitter users' meeting

DrawPdfs

- Developed a tool to display HERAFitter results
- Simple basic usage: `DrawPdfs <dir1> [<dir2>] [...]`
  where dir1, dir2, … are output directories
- Many options available, can see the full list with `DrawPdfs --help`
- Many new developments and improvements since HERAFitter 1.0.0
- A multipage file `plots.pdf` is produced, containing
  - PDF plots
  - Data plots
  - Shifts plots (new)
  - χ^2 and parameters tables (new)
- .pdf .eps .png and .root output options availabls

Disclaimer: following plots are just for illustration, not for physics

PDF plots

PDF plots
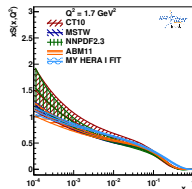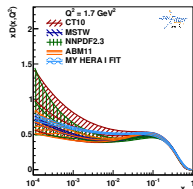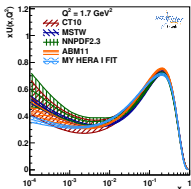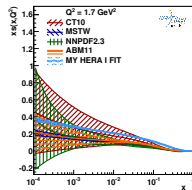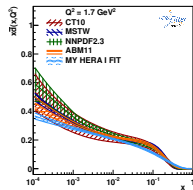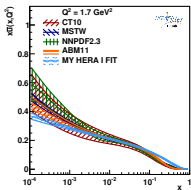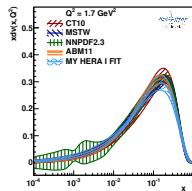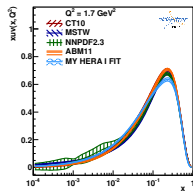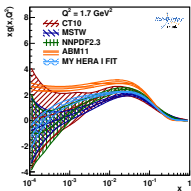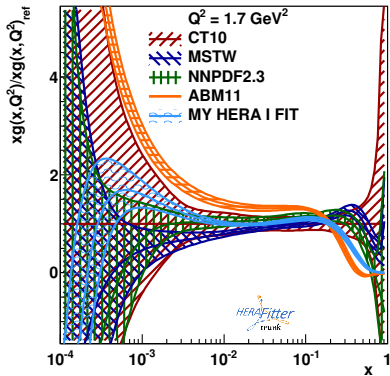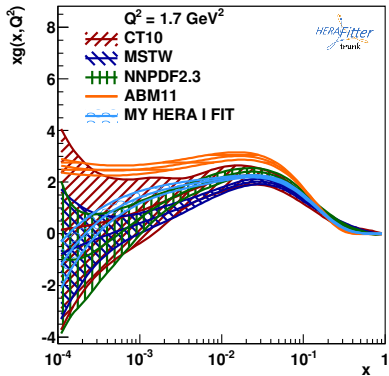
Data plots
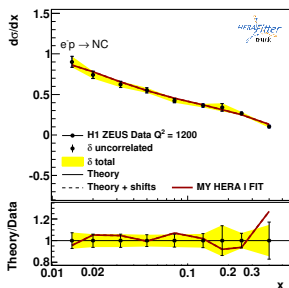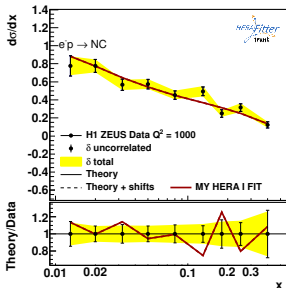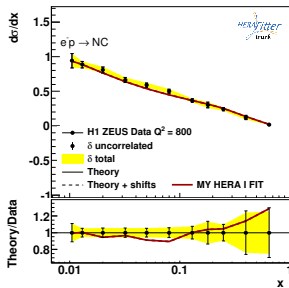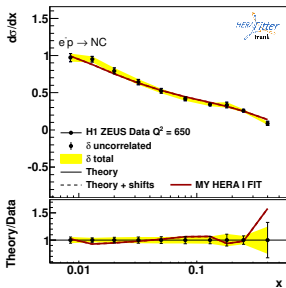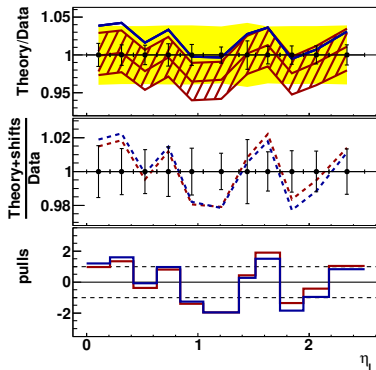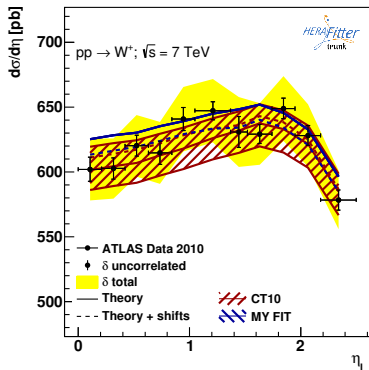
Data plots
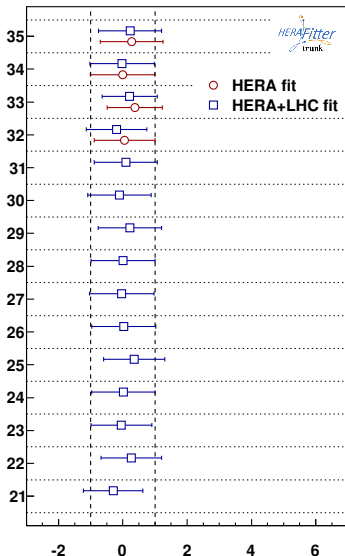
35 HERA_I_Source_proc3

34 HERA_I_Source_proc2

33 HERA_I_Source_proc1

32 HERA_BH_corlum

31 ATL_WZ2010_Source_9

30 ATL_WZ2010_Source_8

29 ATL_WZ2010_Source_7

28 ATL_WZ2010_Source_6

27 ATL_WZ2010_Source_5

26 ATL_WZ2010_Source_4

25 ATL_WZ2010_Source_30

24 ATL_WZ2010_Source_3

23 ATL_WZ2010_Source_29

22 ATL_WZ2010_Source_28

21 ATL_WZ2010_Source_27

χ^2 Tables

Dataset	HERA-I NLO fit	HERA-I NNLO fit
NC cross section HERA-I H1-ZEUS combined e-p.	109 / 145	111 / 145
NC cross section HERA-I H1-ZEUS combined e+p.	308 / 337	305 / 337
CC cross section HERA-I H1-ZEUS combined e-p.	20 / 34	20 / 34
CC cross section HERA-I H1-ZEUS combined e+p.	31 / 34	31 / 34
Correlated χ^2	0.19	0.14
Total χ^2 / dof	468 / 537	467 / 537
χ^2 p-value	0.99	0.99

Parameter Tables

Parameter	HERA-I NLO fit	HERA-I NNLO fit
'Bg'	-0.30 ± 0.15	-0.48 ± 0.15
'Cg'	6.2 ± 1.0	2.93 ± 0.87
'Aprig'	0.87 ± 0.28	0.311 ± 0.069
'Bprig'	-0.37 ± 0.10	-0.574 ± 0.087
'Cprig'	25.00	25.00
'Buv'	0.665 ± 0.037	0.664 ± 0.041
'Cuv'	4.58 ± 0.17	4.64 ± 0.13
'Euv'	10.3 ± 2.3	12.3 ± 2.2
'Bdv'	0.61 ± 0.10	0.64 ± 0.14
'Cdv'	3.44 ± 0.52	3.23 ± 0.51
'CUbar'	2.78 ± 0.72	3.25 ± 0.86
'ADbar'	0.251 ± 0.026	0.250 ± 0.027
'BDbar'	-0.118 ± 0.018	-0.140 ± 0.017
'CDbar'	3.9 ± 1.3	4.8 ± 2.0
'alphas'	0.1180	0.1180
'rs'	1.0000	1.0000
Fit status	converged	converged
Uncertainties	migrad-hesse	migrad-hesse

Summary

- Included in `DrawPdfs` many new functionalities for displaying the HERAFitter output
- Useful tool for analysing results and for comparing with PDF sets available in LHAPDF