Milou grid files : 56 CFF tables

$$\mathcal{H}(\xi, Q^2, t) = \sum_{u,d,s} \int_{-1}^{1} \left[\frac{e_i^2}{1 - x/\xi - i\epsilon} \pm \{\xi \to -\xi\} \right] H_i(x, \xi, Q^2, t) dx$$

	Flavor	u	d	s	G
$\mathcal{H}$	LO amp	luamp.dat	ldamp.dat	lsamp.dat	lgamp.dat
	LO amp pol	luamppol.dat	ldamppol.dat	lsamppol.dat	lgamppol.dat
	LO amp tw3	luamptw3.dat	ldamptw3.dat	lsamptw3.dat	
	LO amp pol tw3	luamppoltw3.dat	ldamppoltw3.dat	lsamppoltw3.dat	
	LO amp tw3 der	luamptw3d.dat	ldamptw3d.dat	lsamptw3d.dat	
	LO amp pol tw3 der	luamppoltw3d.dat	ldamppoltw3d.dat	lsamppoltw3d.dat	
	NLO amp	nlouamp.dat	nlodamp.dat	nlosamp.dat	nlogamp.dat
	NLO amp pol	nlouamppol.dat	nlodamppol.dat	nlosamppol.dat	nlogamppol.dat
$\mathcal{E}$	LO amp	luampe.dat	ldampe.dat	lsampe.dat	lgampe.dat
	LO amp pol	luamppole.dat	ldamppole.dat	lsamppole.dat	lgamppole.dat
	LO amp tw3	luampetw3.dat	ldampetw3.dat	lsampetw3.dat	
	LO amp pol tw3	luamppoletw3d.dat	ldamppoletw3.dat	lsamppoletw3.dat	
	LO amp tw3 der	luampetw3d.dat	ldampetw3d.dat	lsampetw3d.dat	
	LO amp pol tw3 der	luamppoltw3d.dat	ldamppoletw3d.dat	lsamppoletw3d.dat	
	NLO amp	nlouampe.dat	nlodampe.dat	nlosampe.dat	nlogampe.dat
	NLO amp pol	nlouamppole.dat	nlodamppole.dat	nlosamppole.dat	nlogamppole.dat

x: 10^{-4} - 0.7 (58bins)

Real Imaginary

0.0001		
0.10000000E+01	0.97073413E+05	0.15135297E+05
0.15382277E+01	0.87834732E+05	0.24006153E+05
0.21918985E+01	0.82816325E+05	0.32142192E+05
0.29610123E+01	0.80799529E+05	0.39274367E+05
0.38455692E+01	0.80629795E+05	0.45546209E+05
0.48455692E+01	0.81076729E+05	0.51837736E+05
0.59610123E+01	0.81907368E+05	0.58013240E+05
0.71918984E+01	0.83051180E+05	0.64097154E+05
0.85382277E+01	0.84385098E+05	0.70013245E+05
0.10000000E+02	0.85832663E+05	0.75726050E+05
0.14207095E+02	0.89786705E+05	0.89316180E+05
0.19905339E+02	0.94758793E+05	0.10366542E+06
0.26562170E+02	0.99828400E+05	0.11671131E+06
0.34177470E+02	0.10499149E+06	0.12869107E+06
0.42751459E+02	0.11007763E+06	0.13971709E+06
0.52284035E+02	0.11501204E+06	0.14990233E+06
0.62775197E+02	0.11976197E+06	0.15935316E+06
0.74224773E+02	0.12431643E+06	0.16815756E+06
0.86633093E+02	0.12867862E+06	0.17639231E+06
0.10000000E+03	0.13285340E+06	0.18412443E+06
0.14248481E+03	0.14467614E+06	0.20154334E+06
0.19948738E+03	0.15633725E+06	0.22090575E+06
0.26606177E+03	0.16687011E+06	0.23790022E+06
0.34220190E+03	0.17644665E+06	0.25302798E+06
0.42791473E+03	0.18520799E+06	0.26665064E+06

Q^2 : 1 - 10^4 GeV^2 (40 bins)

Fazio, Salvatore 📎   October 21, 2019 at 12:16
Re: t-dep of CFFs   Details
To: Jinlong Zhang, Sznajder Paweł, Cc: hmoutard & 4 more

Hi all,

as we discussed today, in attache is a zipped file containing the McDermott's code.
Please have a look at the readmenew.txt file for instructions.

The code is two-fold.
STEP 1 - you compile and run evolvegpd.f, it generates GPDs data tables for fixed skewedness.

STEP 2 - you compile and run dvcsamp.f, it computes the amplitudes used by the generator.

Cheers,
Sal

- conv1.f
- cteq6l.tbl
- cteq6m.tbl
- derivfunc.f
- dvcsamp.f
- dvcsamp.out
- evolvegpd2.f
- fort.56
- inputgpdglobalgrid.f
- readmenew.txt
- val2000_lo_g1.grid
- val2000_nlo_g1.grid
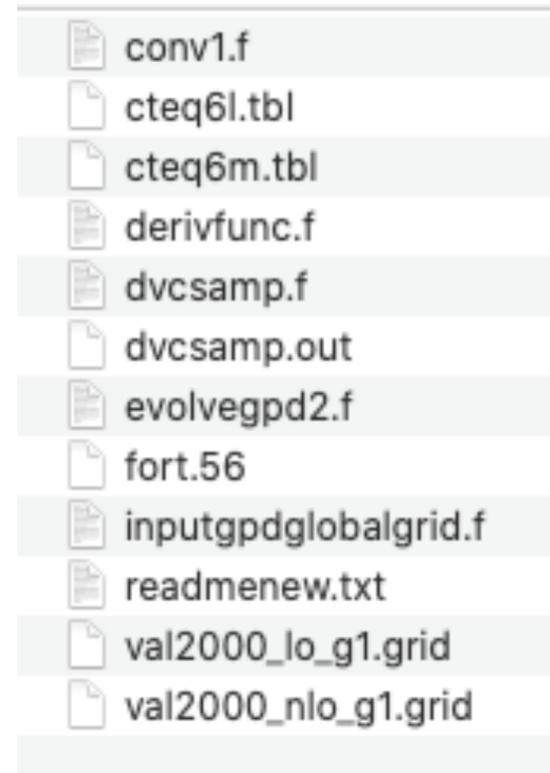
```
The output, i.e. the amplitudes, will be written in files:

LO (twist-2): l*amp.dat where * runs over u,d,s and g for amplitude H
     l*amppol.dat where * runs over u,d,s and g for amplitude \tilde H
     l*ampe.dat where * runs over u,d,s and g for amplitude E
     l* amppole.dat where * runs over u,d,s and g for amplitude \tilde E

NLO (twist-2): nlo*amp.dat where * runs over u,d,s and g for amplitude H
     nlo*amppol.dat where * runs over u,d,s and g for amplitude \tilde H
     nlo*ampe.dat where * runs over u,d,s and g for amplitude E
     nlo*pole.dat where * runs over u,d,s and g for amplitude \tilde E

LO (twist-3): l*amptw3.dat where * runs over u,d,s and g for amplitude H
     l*amppoltw3.dat where * runs over u,d,s and g for amplitude \tilde H
     l*ampetw3.dat where * runs over u,d,s and g for amplitude E
     l* amppoletw3.dat where * runs over u,d,s and g for amplitude \tilde E

The derivative of the LO twist-3 amplitudes is computed with derivfunc.f.
This program needs the the files l*amptw3.dat,l*amppoltw3.dat,l*ampetw3.dat
and l* amppoletw3.dat as input!
```

# Milou CFF table example: d-quark, LO, unpolarized


$\mathcal{H}$

$\mathcal{E}$
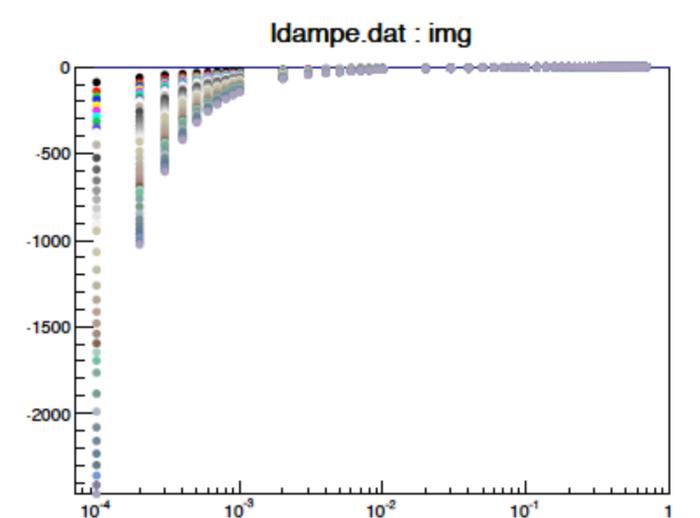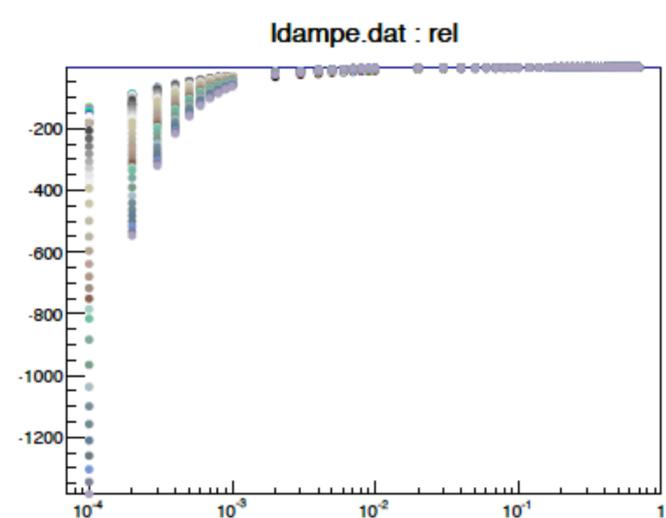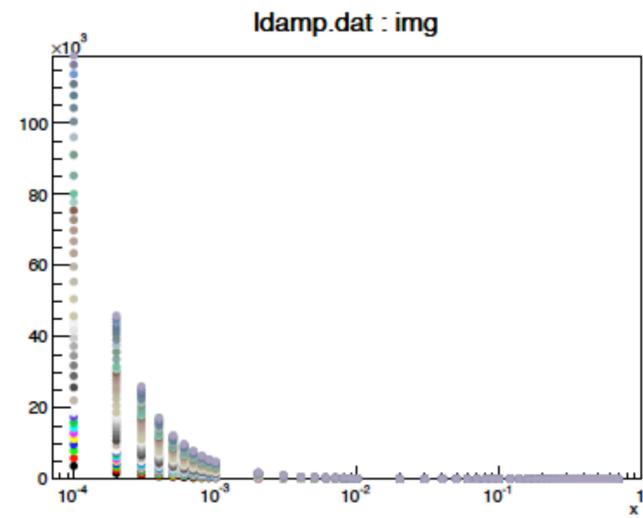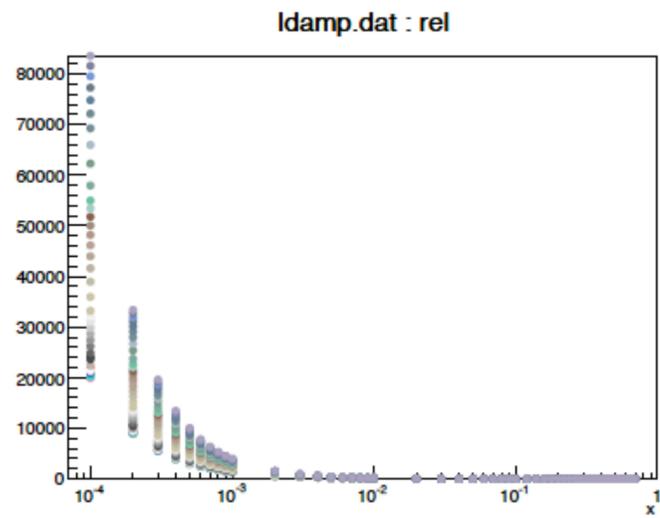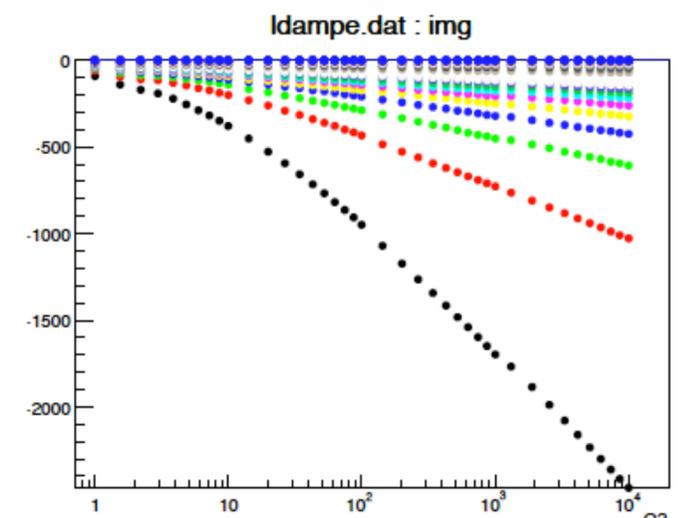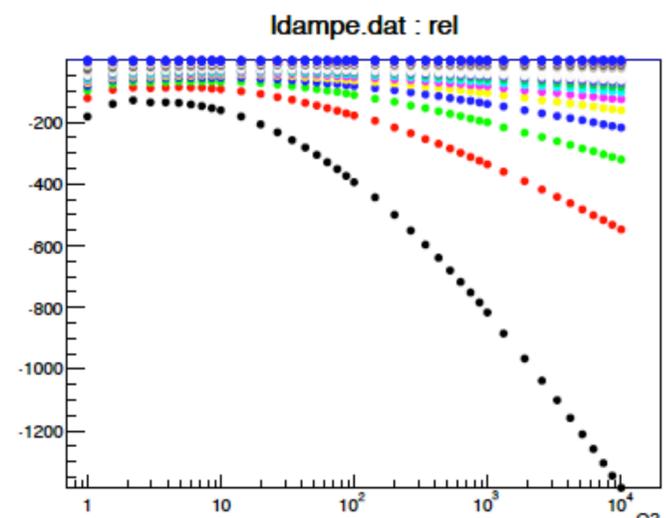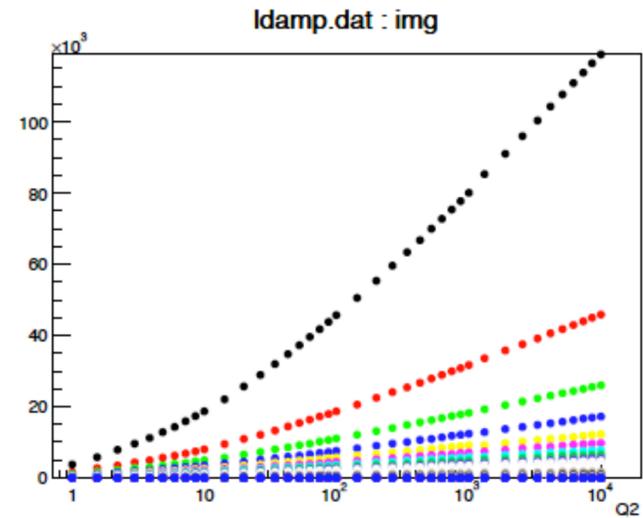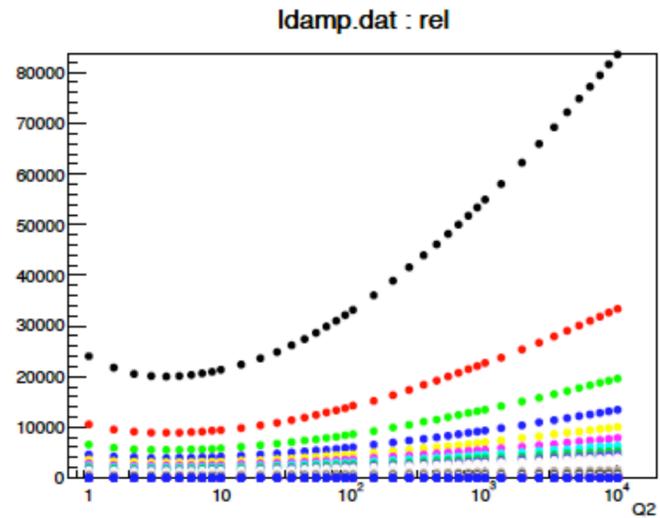
Milou CFF table example: d-quark, LO, polarized

$\tilde{\mathcal{H}}$

$\tilde{\mathcal{E}}$
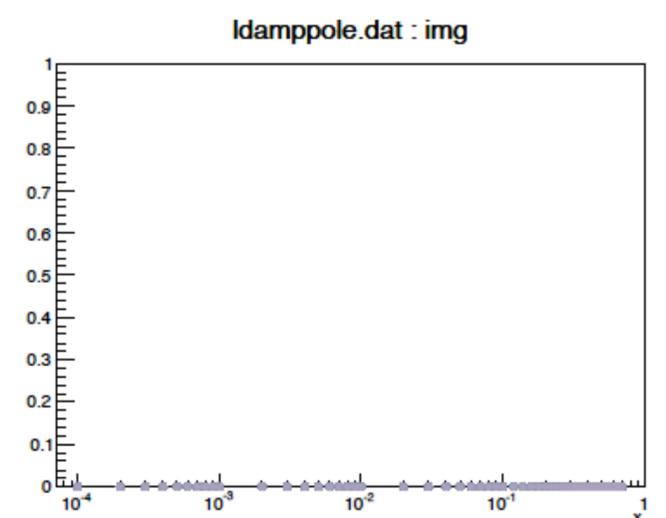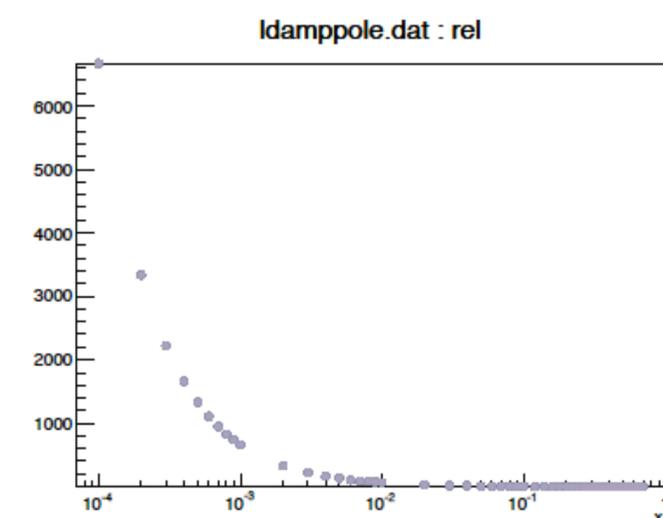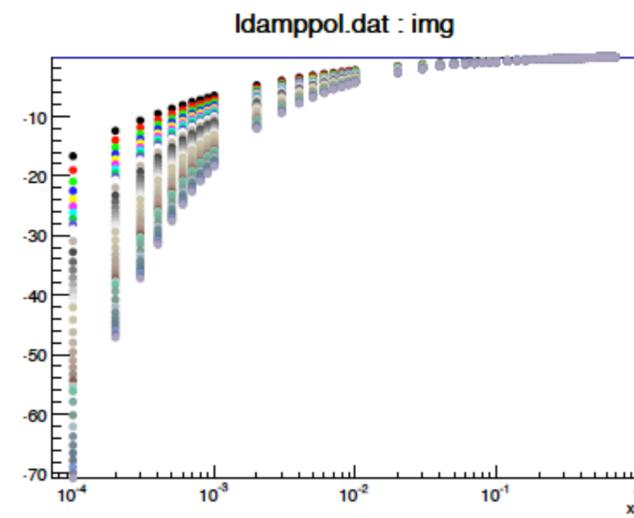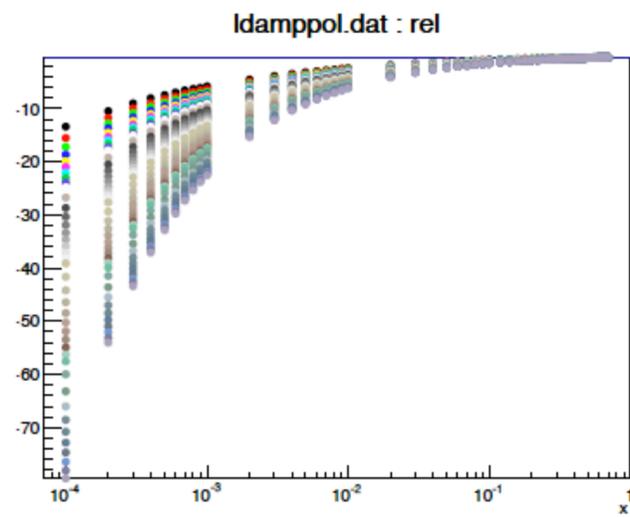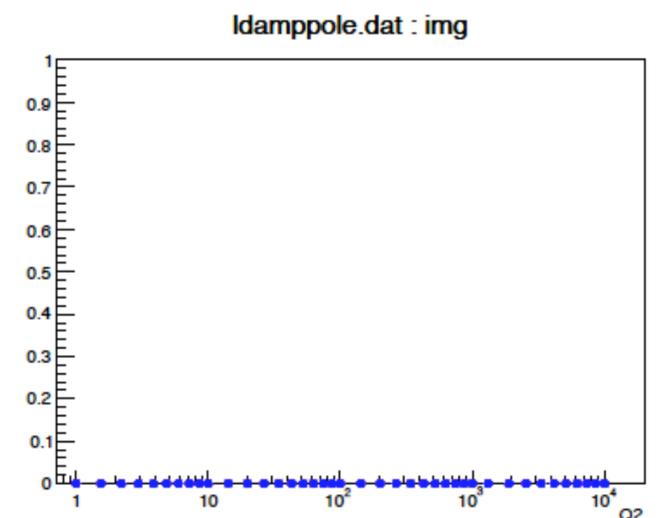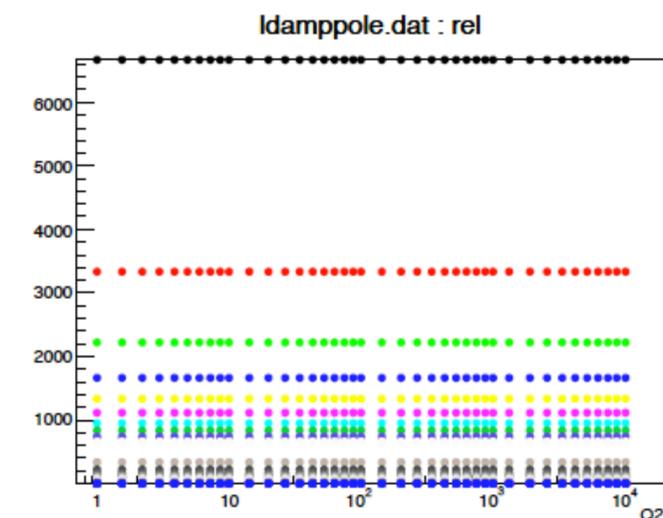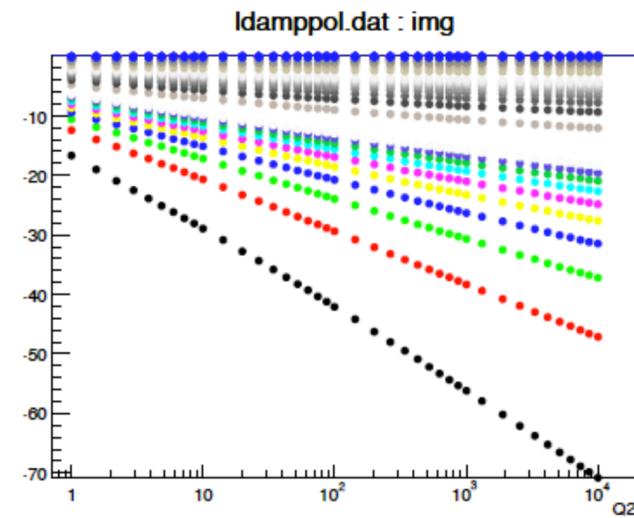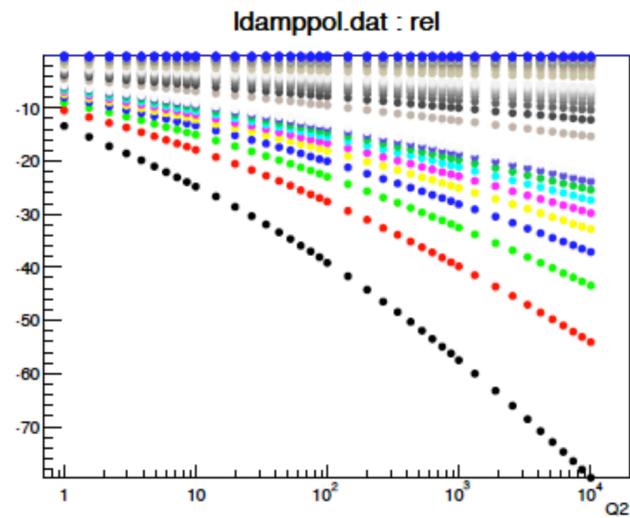
Milou CFF table example: d-quark, $\mathcal{H}$, LO, Twist-3, unpolarized
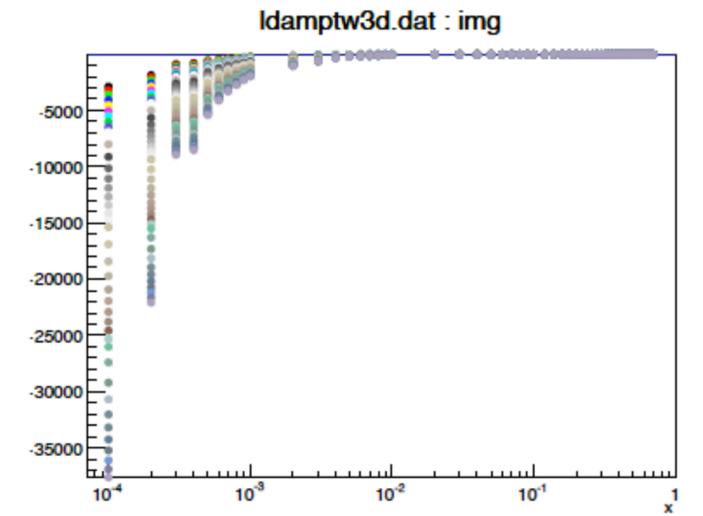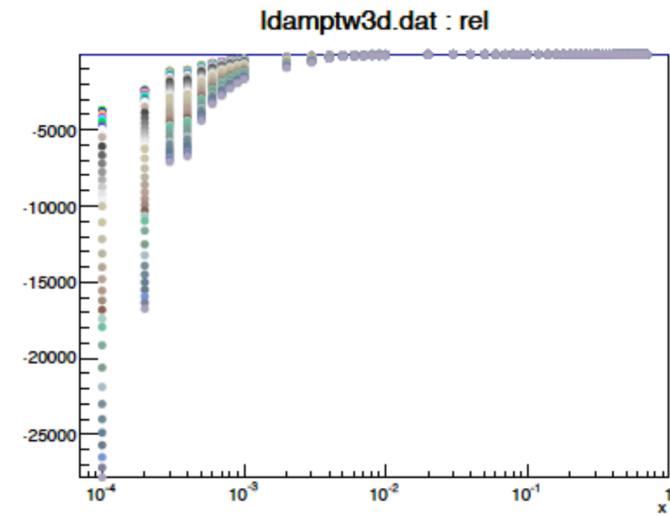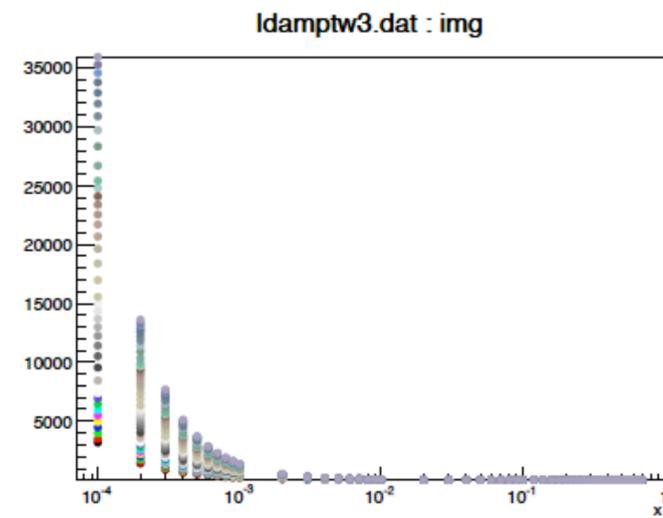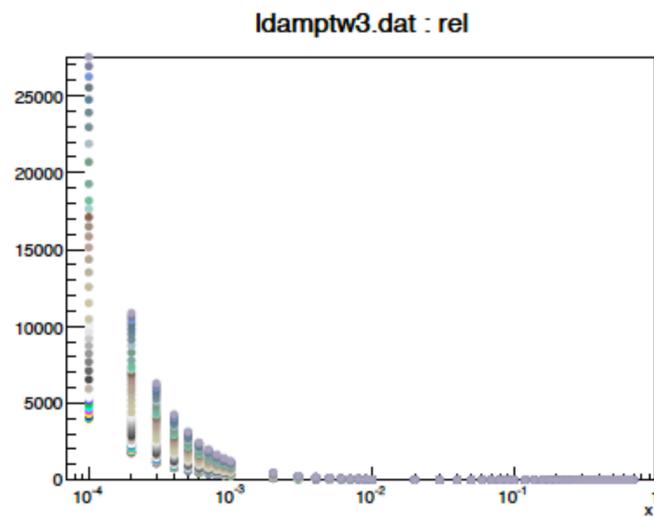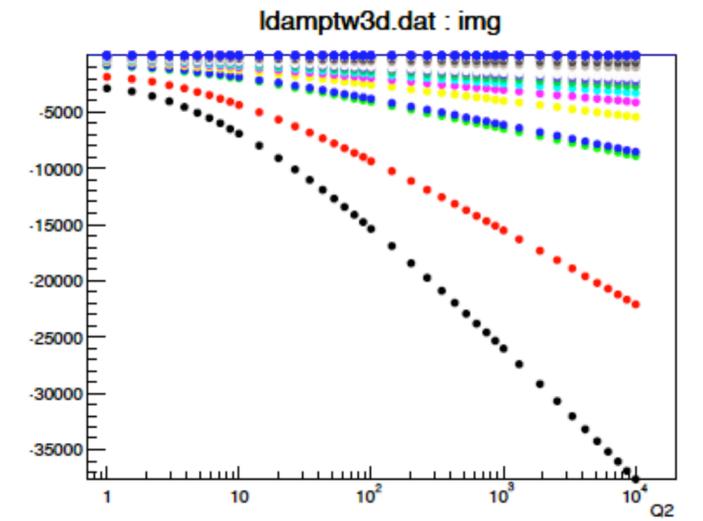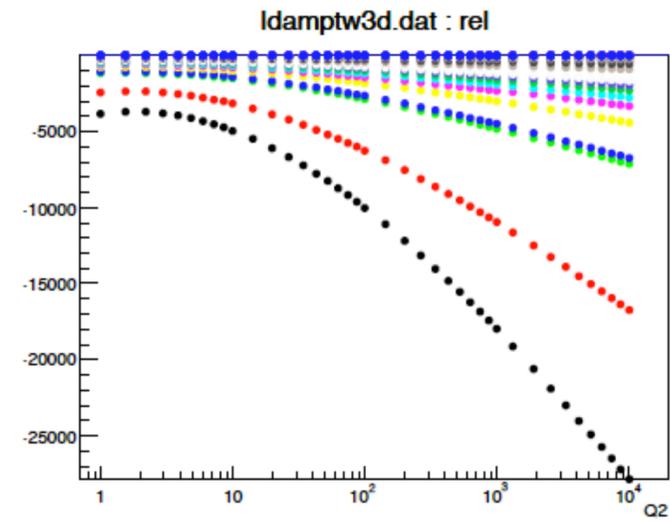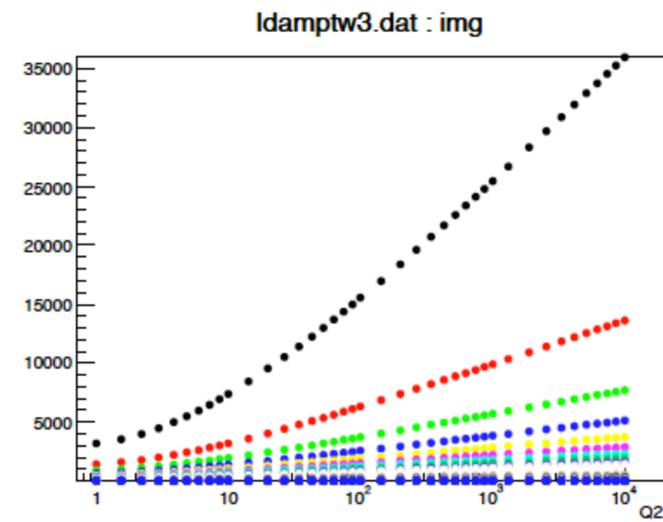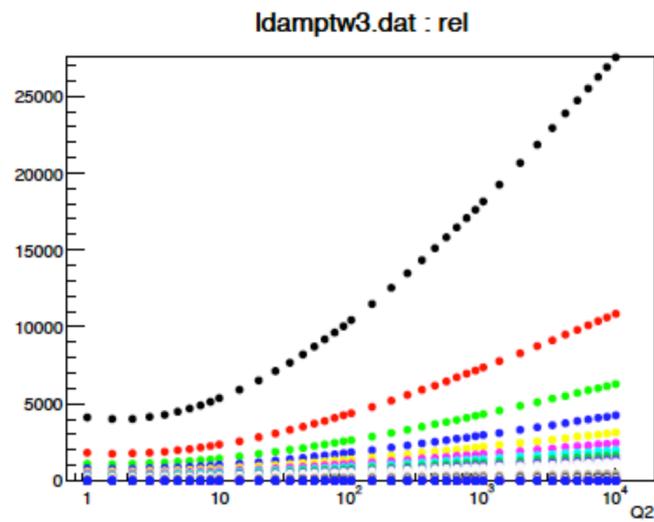

Twist-3

Twist-3 derivative

Milou CFF table example: d-quark, \tilde{$\mathcal{H}$}, LO, Twist-3, polarized
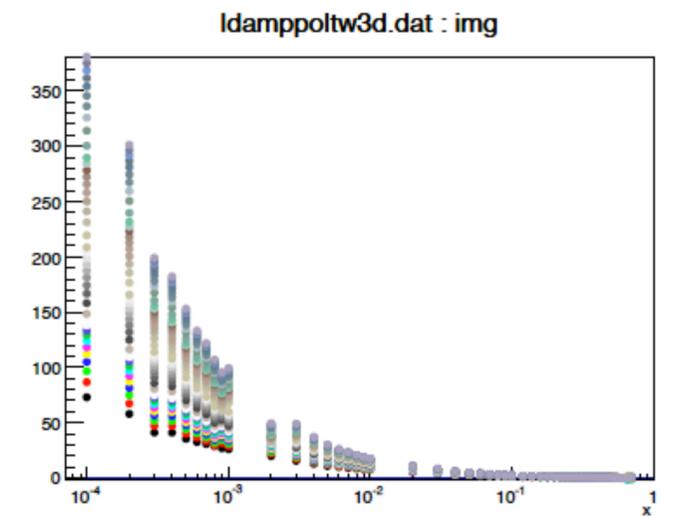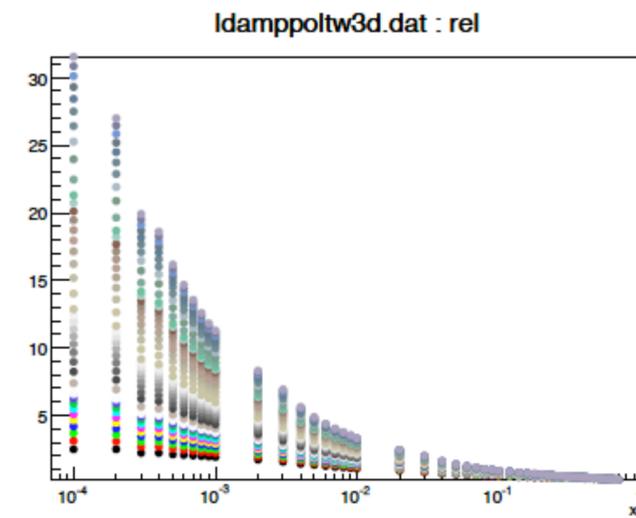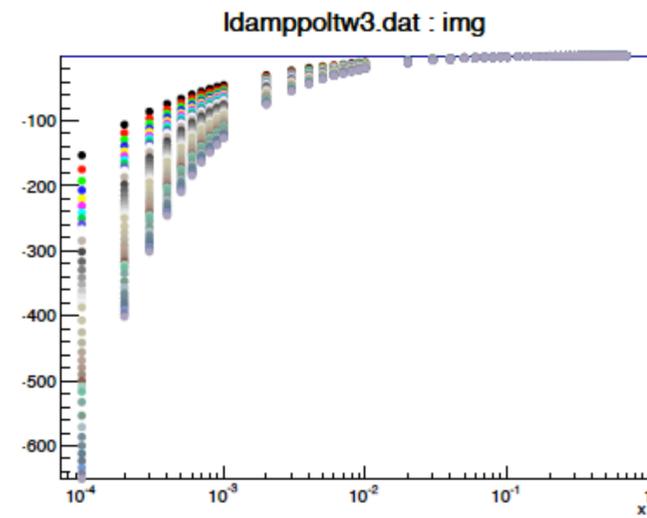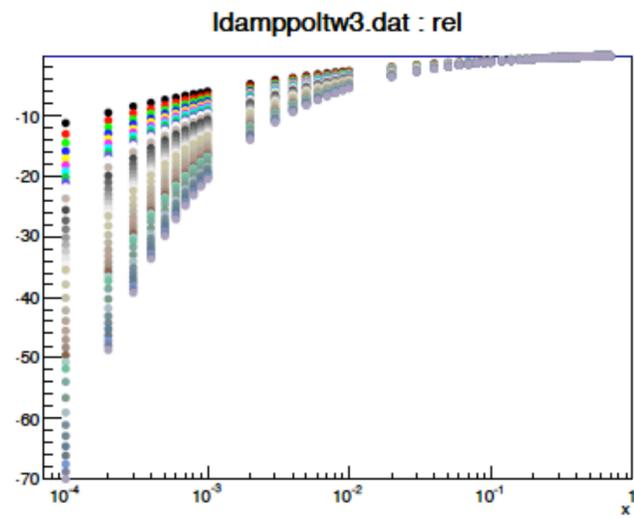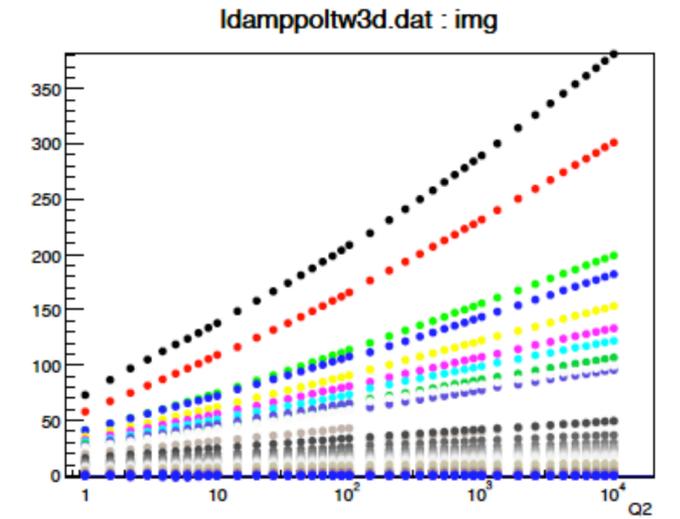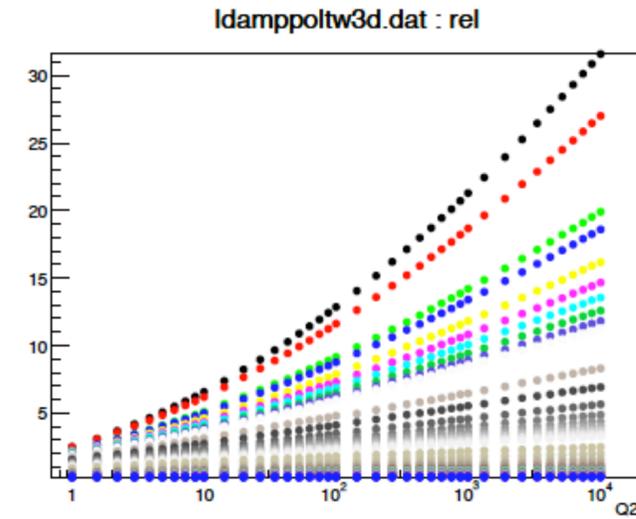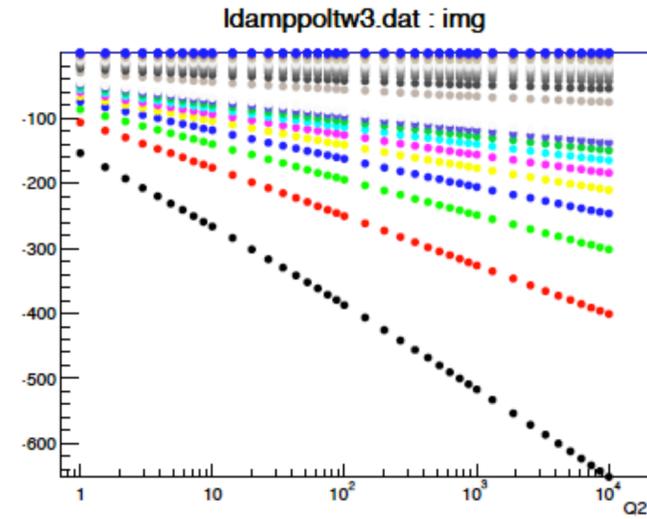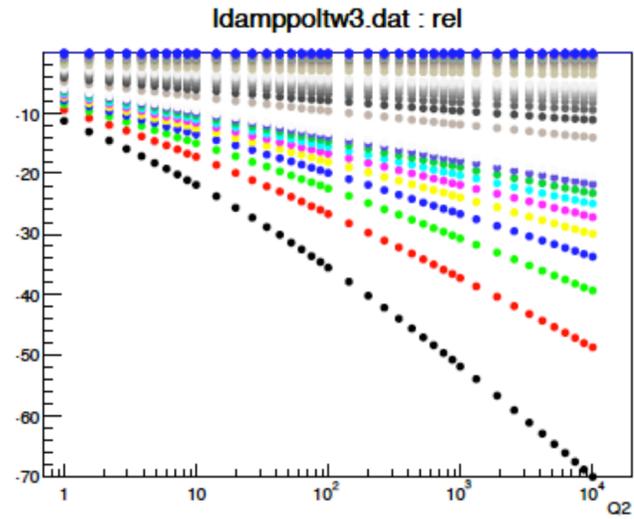

Twist-3

Twist-3 derivative

# Milou CFF table example: d-quark, $\mathcal{E}$, LO, Twist-3, unpolarized
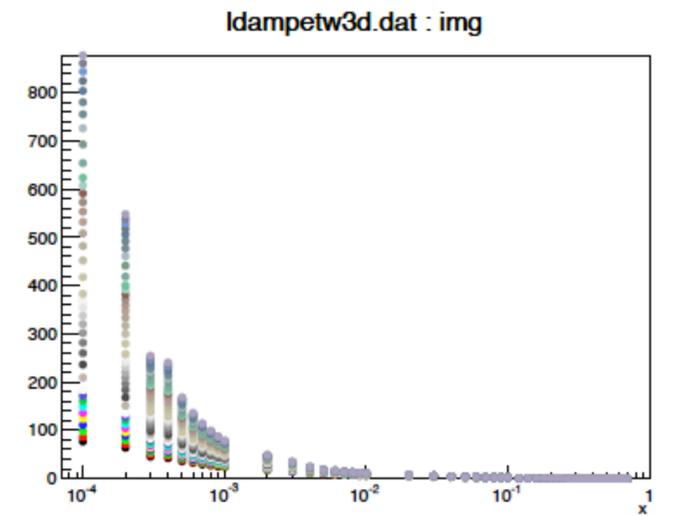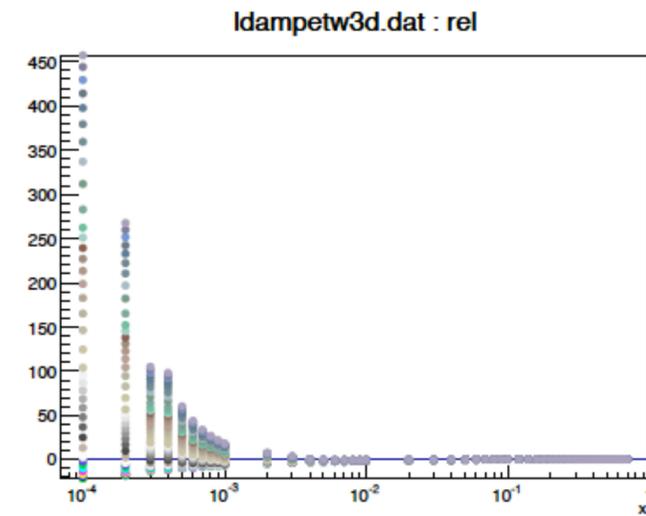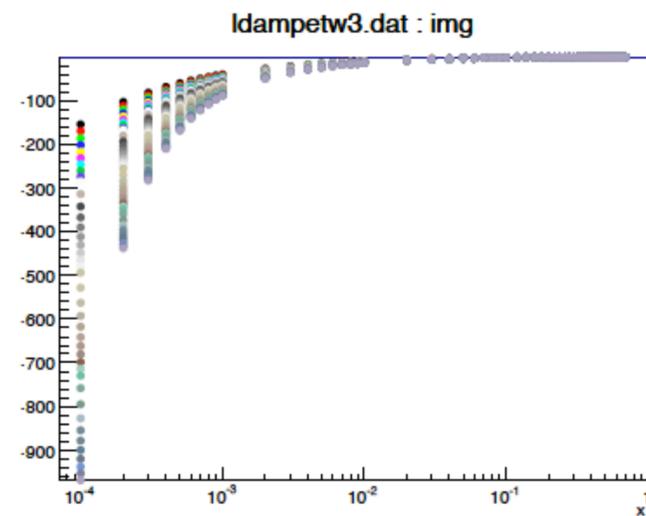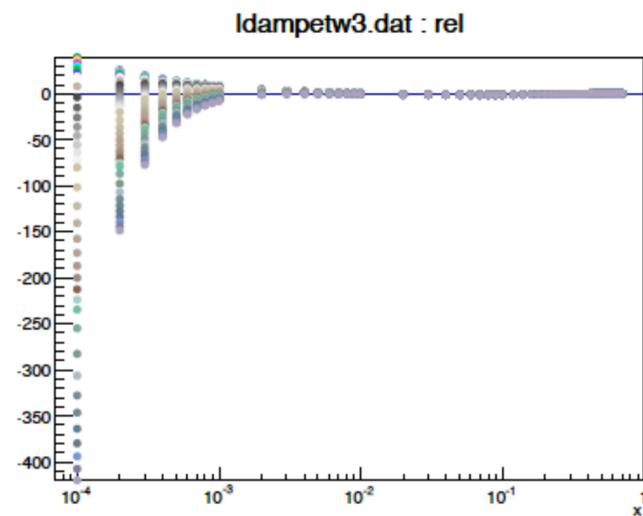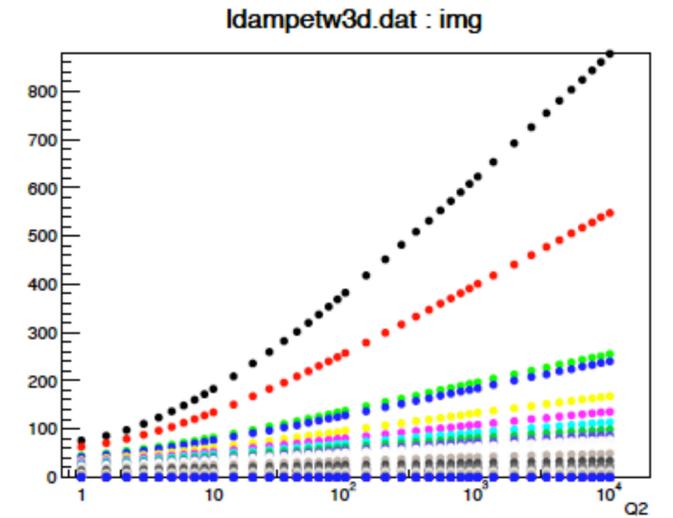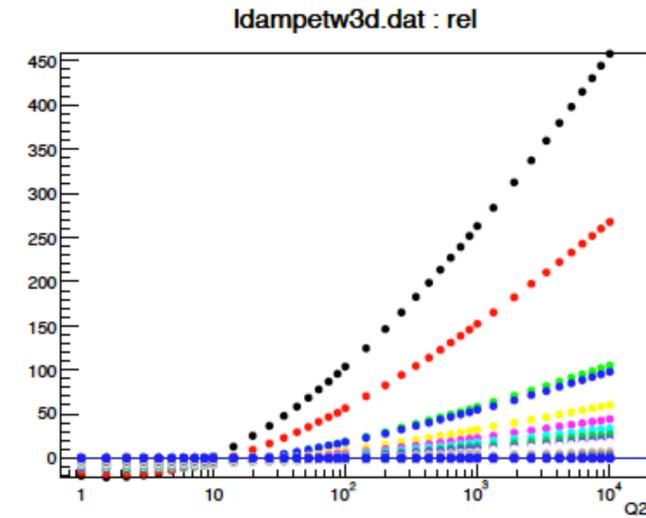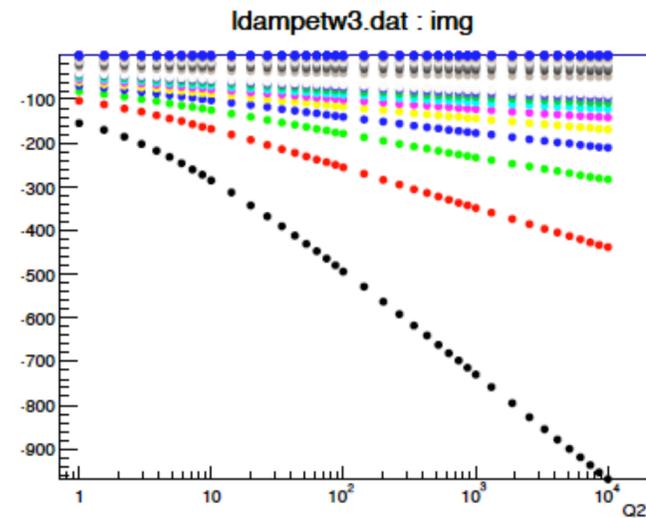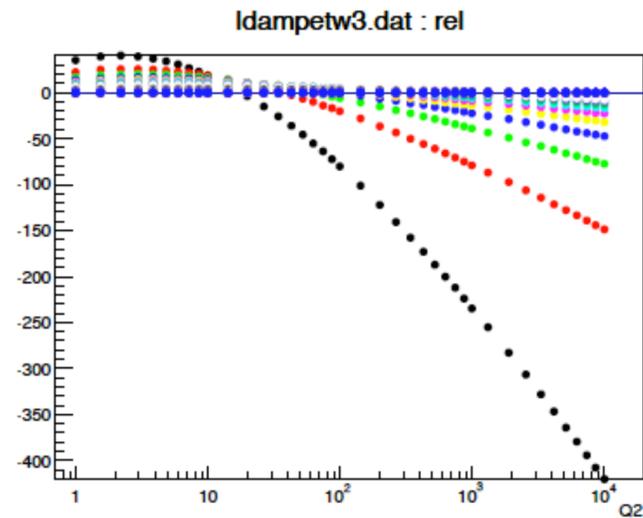
Twist-3   Twist-3 derivative

Milou CFF table example: d-quark, \tilde{$\mathcal{E}$}, LO, Twist-3, polarized
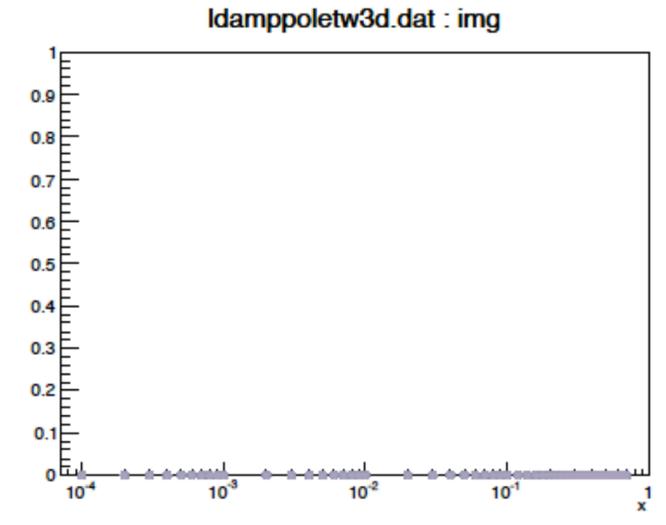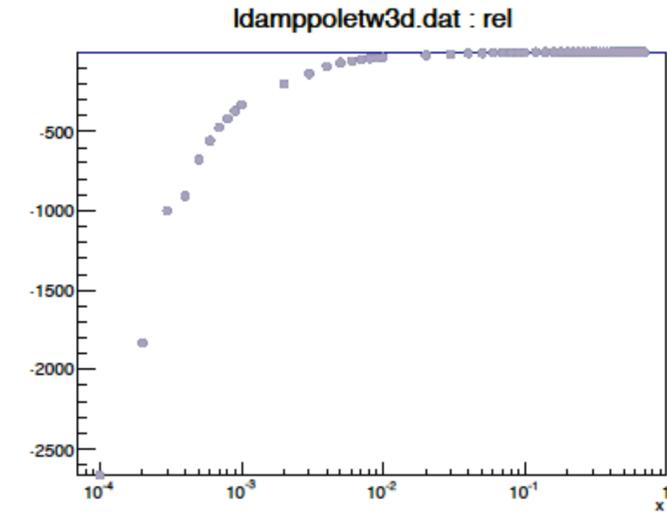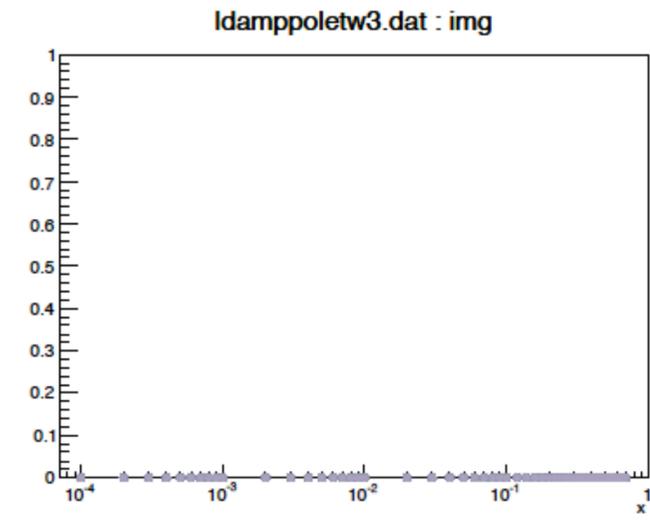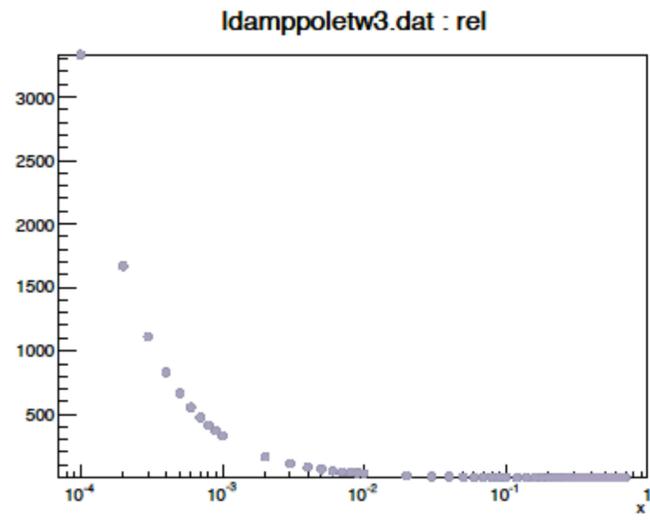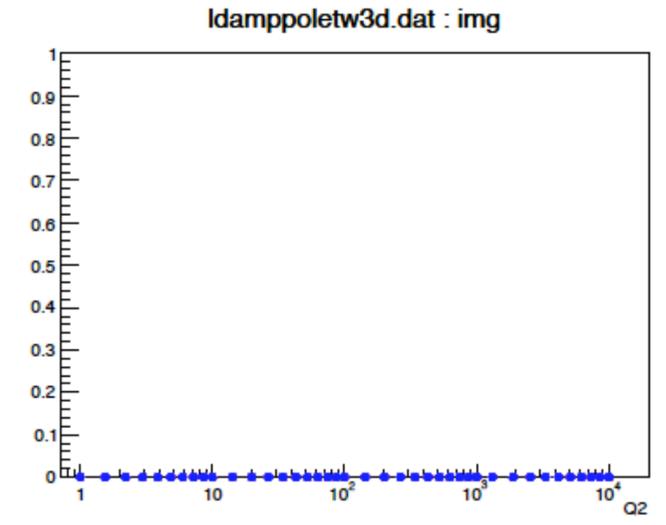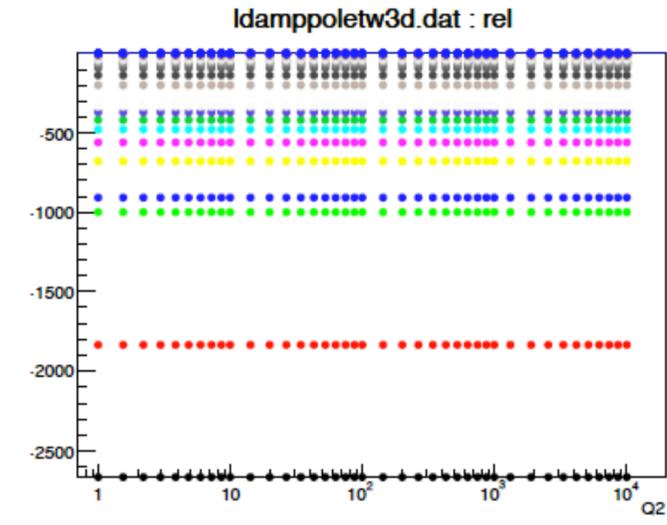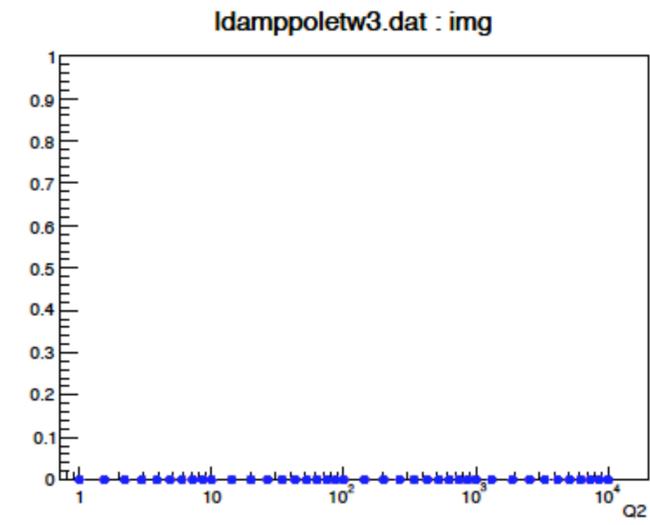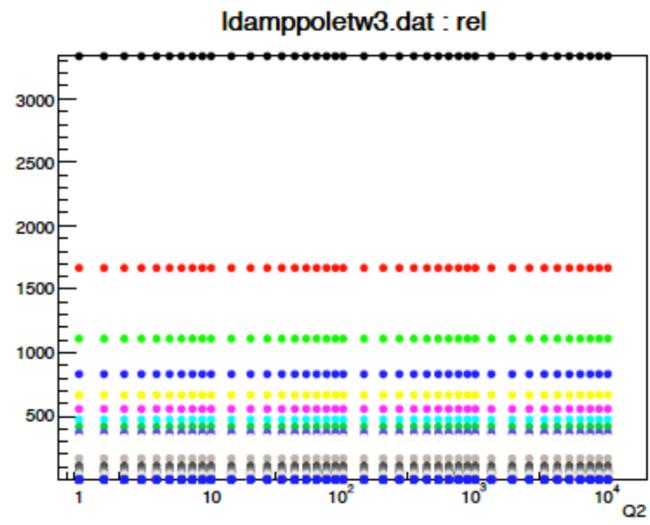
Twist-3

Twist-3 derivative

Complete plots for all 56 CFF tables

https://www.dropbox.com/s/q3f9mz51zyacmxn/milou_gridfile_all.pdf?dl=0