The LaTeX report

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1 Setup

1.1 Command history

```
ma5>import /home/alessandro/Documents/PhD/courses/MG5_aMC/mg5amcnlo/2.7.3-new/_day3_sm/-
bin/internal/ufomodel
ma5>import /home/alessandro/Documents/PhD/courses/MG5_aMC/mg5amcnlo/2.7.3-new/_day3_sm/-
Events/run_01/unweighted_events.lhe.gz as unweighted_events
ma5>define vl = 12 14 16
ma5>define vl  = -16 -14 -12
ma5>define invisible = ve ve  vm vm  vt vt  vl vl
ma5>set main.graphic_render = matplotlib
ma5>plot MET 40 200 500 [logY]
ma5>plot PT(j[1]) 40 200 800 [logY]
ma5>plot ETA(j[1]) 40 -4 4 [logY]
ma5>plot MT_MET(j[1]) 40 400 1600 [logY]
ma5>submit /home/alessandro/Documents/PhD/courses/MG5_aMC/mg5amcnlo/2.7.3-new/_day3_sm/-
MA5_PARTON_ANALYSIS_analysis1
```

1.2 Configuration

- MadAnalysis version 1.8.45 (2020/05/01).
- Histograms given for an integrated luminosity of 10fb^{-1}.

2 Datasets

2.1 unweighted_events

- Sample consisting of: signal events.
- Generated events: 10000 events.
- Normalization to the luminosity: 6360550+/- 21903 events.
- Ratio (event weight): 636 - warning: please generate more events (weight larger than 1)!

Path to the event file	Nr. of events	Cross section (pb)	Negative wgts (%)
_day3_sm/Events/run_01/-unweighted_events.lhe.gz	10000	636 @ 0.34%	0.0

3 Histos and cuts

3.1 Histogram 1

*** Plot: MET**

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
unweighted_eve	6360550	1.0	79.1534	35.31	98.46	0.01

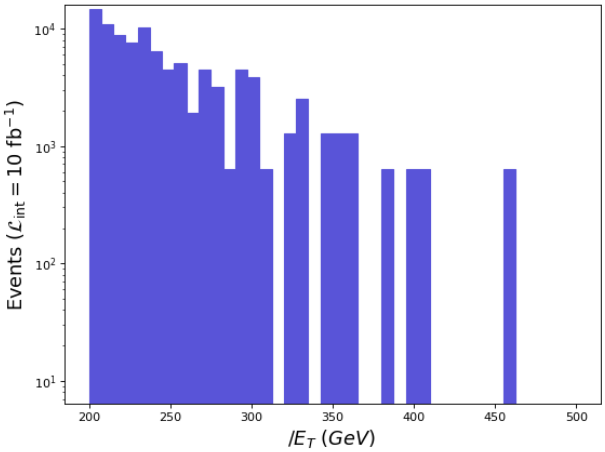

Figure 1.

3.2 Histogram 2

*** Plot: PT (j[1])**

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
unweighted_eve	6360549	1.0	79.1534	35.31	98.46	0.0

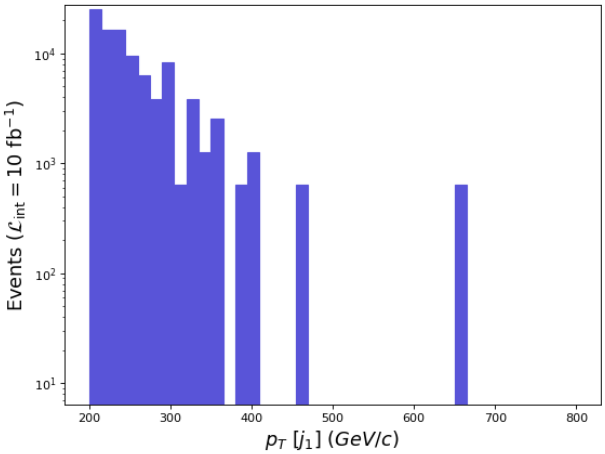

Figure 2.

3.3 Histogram 3

*** Plot: ETA (j[1])**

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
unweighted_eve	6360549	1.0	0.020844	1.806	0.4	0.33

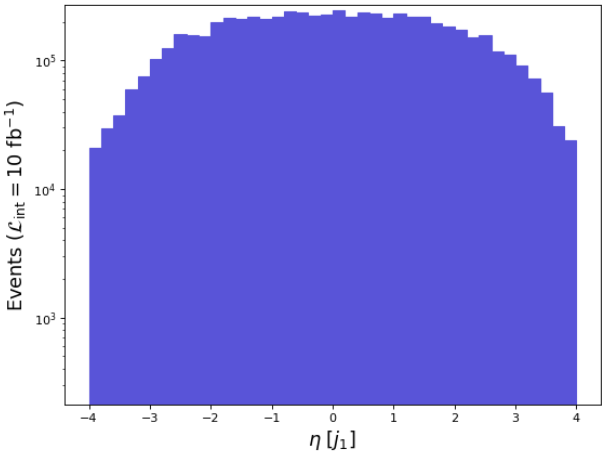

Figure 3.

3.4 Histogram 4

*** Plot: MT_MET (j[1])**

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
unweighted_eve	6360549	1.0	158.307	70.63	98.46	0.0

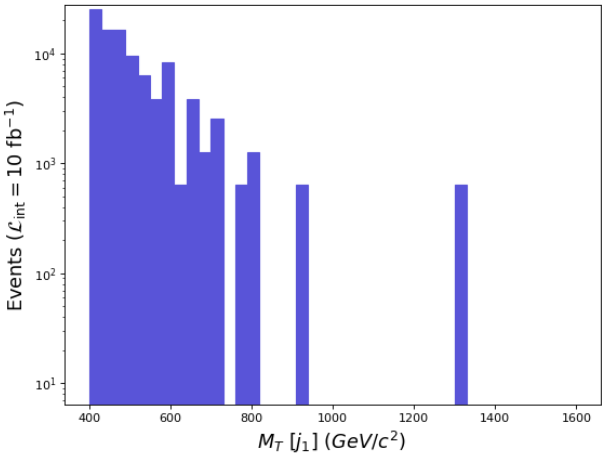

Figure 4.