The LaTeX report

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1 Setup

1.1 Command history

```
ma5>import output_pp_xdxdxj/bin/internal/ufomodel
ma5>import output_pp_vlvlxj/Events/run_sm_ptj200/unweighted_events.lhe.gz as sm_pj
ma5>import output_pp_xdxdxj/Events/run_dm_ptj200/unweighted_events.lhe.gz as dm_pj
ma5>set main.lumi = 0.1
ma5>set main.stacking_method = normalize2one
ma5>set sm_pj.type = background
ma5>set sm_pj.backcolor = none
ma5>set sm_pj.linecolor = red
ma5>set dm_pj.type = signal
ma5>set dm_pj.backcolor = none
ma5>set dm_pj.linecolor = green
ma5>
ma5>
ma5>plot MET 251 150 650 [logY]
ma5>plot P(j) 251 150 650 [logY]
ma5>plot PT(j) 251 150 650 [logY]
ma5>plot Y(j) 51 -5 5
ma5>plot PHI(j) 41 -4 4
ma5>submit output_ma5_analysis_ptj200
```

1.2 Configuration

- MadAnalysis version 1.9.32 (2021/07/16).
- Histograms given for an integrated luminosity of 0.1fb^{-1}.

2 Datasets

2.1 sm_pj

- Sample consisting of: background events.
- Generated events: 10000 events.
- Normalization to the luminosity: 1057+/- 4 events.
- Ratio (event weight): 0.11 .

Path to the event file	Nr. of events	Cross section (pb)	Negative wgts (%)
output_pp_vlvlxj/-Events/run_sm_ptj200/-unweighted_events.lhe.gz	10000	10.6 @ 0.34%	0.0

2.2 dm_pj

- Sample consisting of: signal events.
- Generated events: 10000 events.
- Normalization to the luminosity: 22+/- 1 events.
- Ratio (event weight): 0.0022 .

Path to the event file	Nr. of events	Cross section (pb)	Negative wgts (%)
output_pp_xdxdxj/-Events/run_dm_ptj200/-unweighted_events.lhe.gz	10000	0.221 @ 0.28%	0.0

3 Histos and cuts

3.1 Histogram 1

*** Plot: MET**

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
sm_pj	1.0	1.0	260.898	71.47	0.0	0.43
dm_pj	1.0	1.0	270.292	75.4	0.0	0.37

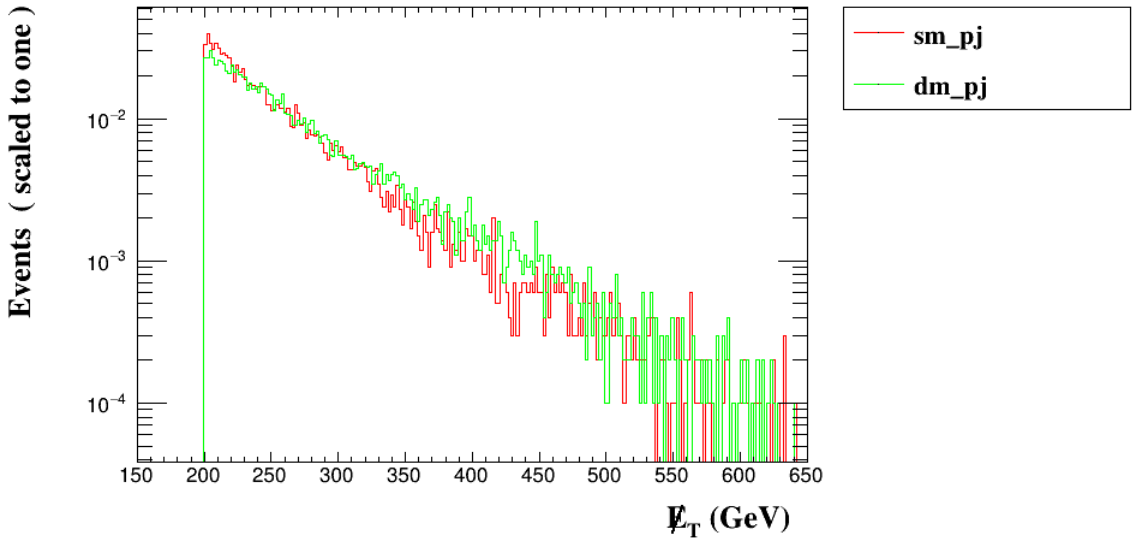

Figure 1.

3.2 Histogram 2

*** Plot: P (j)**

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
sm_pj	1.0	1.0	553.943	414.7	0.0	25.73
dm_pj	1.0	1.0	645.019	538.5	0.0	31.69

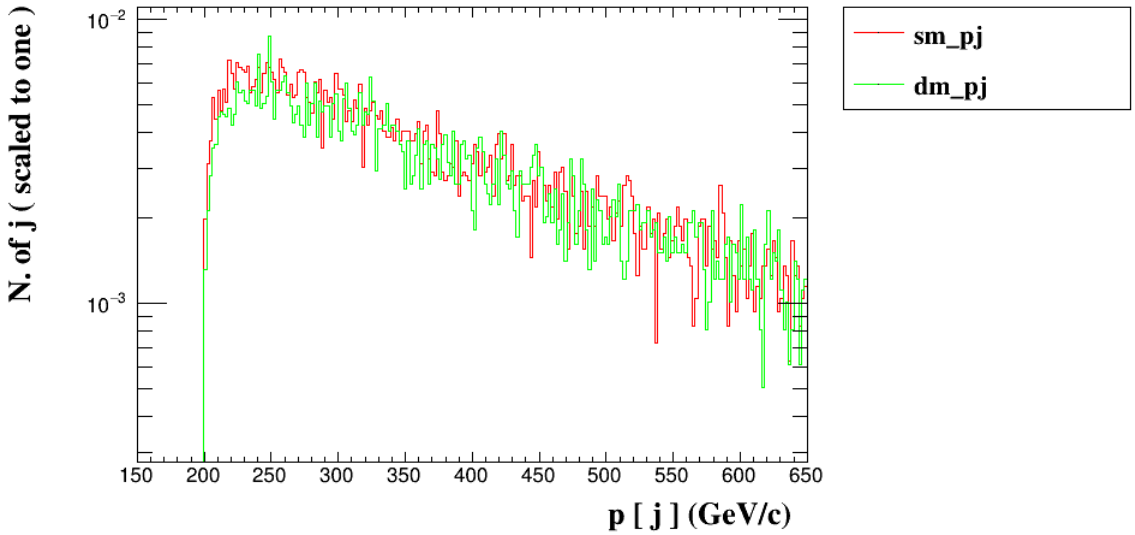

Figure 2.

3.3 Histogram 3

*** Plot: PT (j)**

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
sm_pj	1.0	1.0	261.136	71.9	0.0	0.4476
dm_pj	1.0	1.0	270.314	75.33	0.0	0.3744

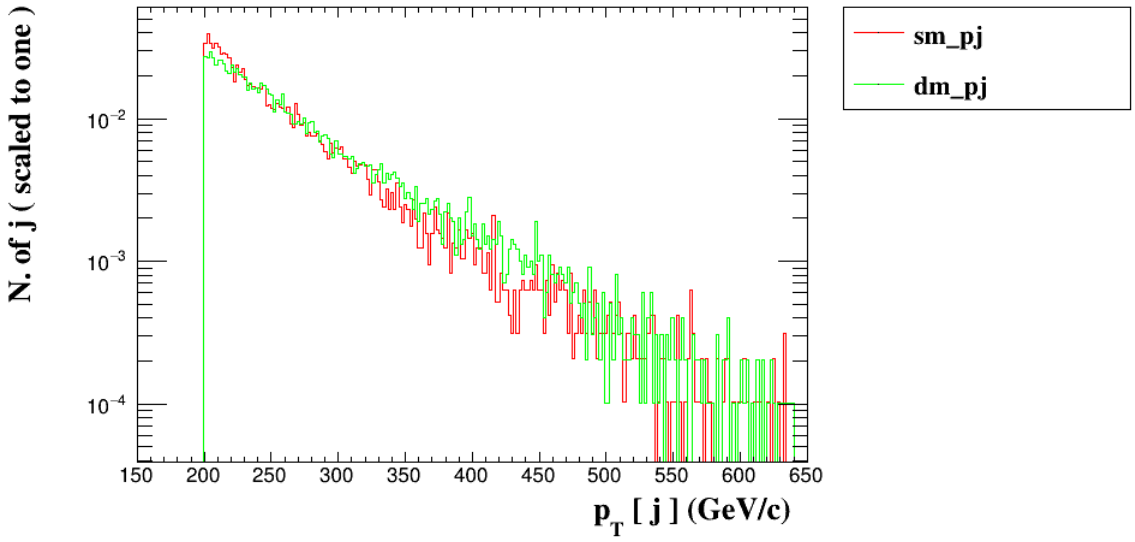

Figure 3.

3.4 Histogram 4

*** Plot: Y (j)**

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
sm_pj	1.0	1.0	0.0107917	1.298	0.0	0.0
dm_pj	1.0	1.0	-0.00516148	1.404	0.0	0.0

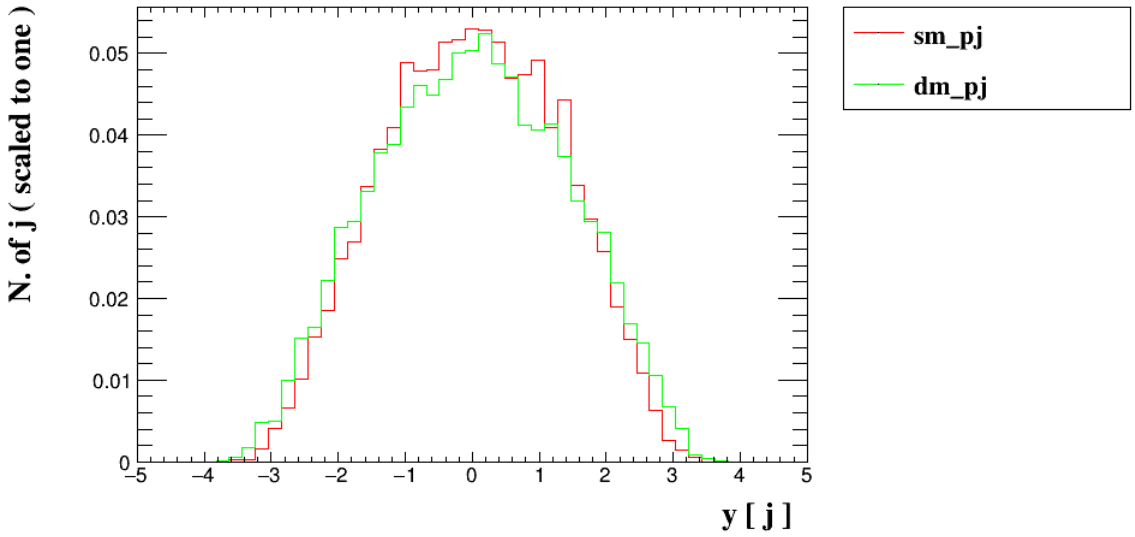

Figure 4.

3.5 Histogram 5

*** Plot: PHI (j)**

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
sm_pj	1.0	1.0	-0.000580689	1.821	0.0	0.0
dm_pj	1.0	1.0	0.0107691	1.805	0.0	0.0

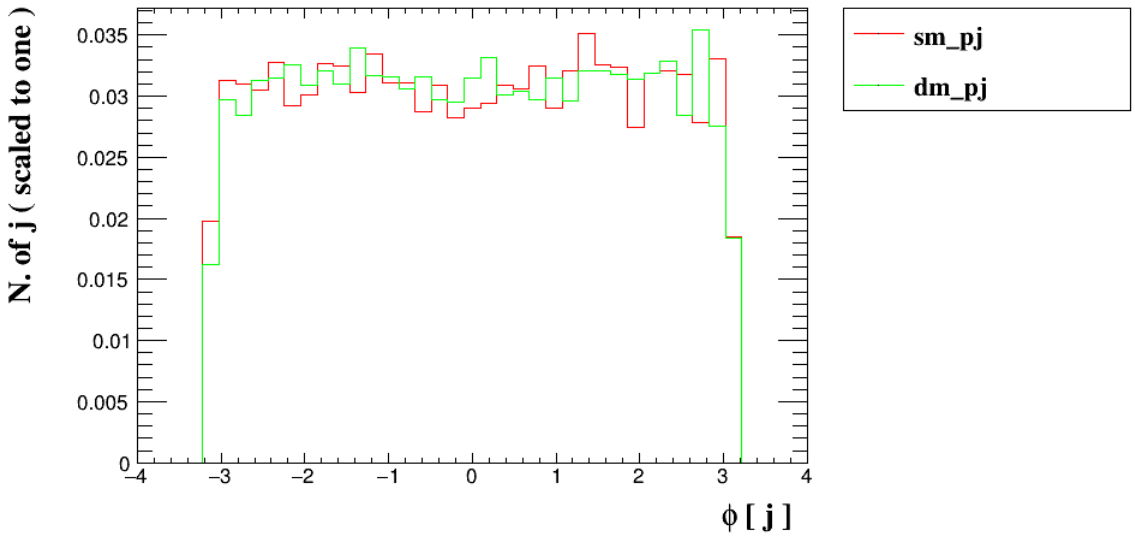

Figure 5.