

Generated by bkailasa on 27 March 2020, 11:11:01

This report has been generated automatically by Madanalysis 5.

Please cite:

E. Conte, B. Fuks and G. Serret,

MadAnalysis 5, A User-Friendly Framework for Collider Phenomenology, Comput. Phys. Commun. **184** (2013) 222-256, arXiv:1206.1599 [hep-ph].

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1 Setup

1.1 Command history

```
ma5>import /afs/cern.ch/work/b/bkailasa/MCGens/madgraph/MG5_aMC_v2_6_7/MSSMD/bin/-
internal/ufomodel
ma5>import /afs/cern.ch/work/b/bkailasa/MCGens/madgraph/MG5_aMC_v2_6_7/MSSMD/Events/-
run_02_decayed_1/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 = root
ma5>plot THT 40 0 500 [logY]
ma5>plot SQRTS 40 0 500 [logY]
ma5>plot PT(h[1]) 40 0 500 [logY]
ma5>plot ETA(h[1]) 40 -10 10 [logY]
ma5>submit /afs/cern.ch/work/b/bkailasa/MCGens/madgraph/MG5_aMC_v2_6_7/MSSMD/MA5_PARTON_ANALYSIS_a
```

1.2 Configuration

- MadAnalysis version 1.8.31 (2019/11/06).
- Histograms given for an integrated luminosity of 10fb⁻¹.

2 Datasets

2.1 unweighted_events

 \bullet Sample consisting of: signal events.

• Generated events: 10000 events.

 \bullet Normalization to the luminosity: 6323+/- 6 $\,$ events.

• Ratio (event weight): 0.63.

Path to the event file	Nr. of events	Cross section (pb)	Negative wgts (%)
Events/run_02_decayed_1/-unweighted_events.lhe.gz	10000	0.632 @ 0.086%	0.0

3 Histos and cuts

3.1 Histogram 1

* Plot: THT

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
unweighted_eve	6323	1.0	0.0	0.0	0.0	0.0

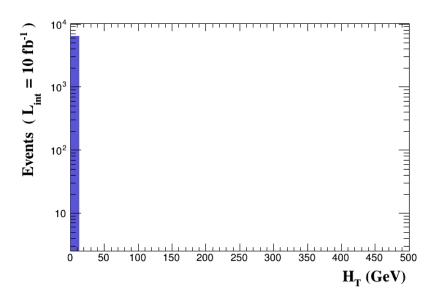


Figure 1.

3.2 Histogram 2

* Plot: MET

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
unweighted_eve	6323	1.0	5.21089e-10	3.419e-10	0.0	0.0

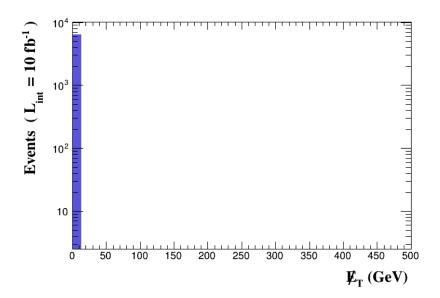


Figure 2.

3.3 Histogram 3

* Plot: SQRTS

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
unweighted_eve	6323	1.0	125.0	0.04768	0.0	0.0

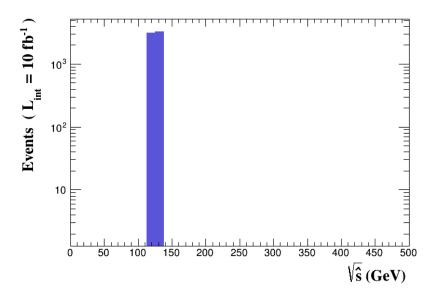


Figure 3.

3.4 Histogram 4

* Plot: PT (h[1])

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
unweighted_eve	0.0 + / - 0.0	0.	0.0	0.0	0.0	0.0

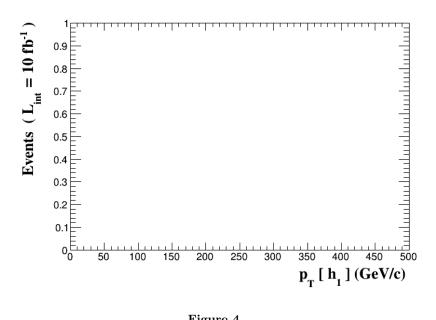


Figure 4.

Histogram 5 3.5

* Plot: ETA (h[1])

Dataset	Integral	Entries per event	Mean	RMS	% underflow	% overflow
unweighted_eve	0.0 +/- 0.0	0.	0.0	0.0	0.0	0.0

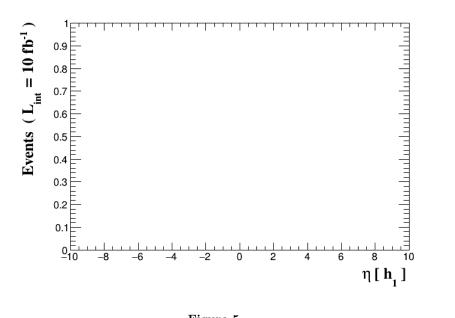


Figure 5.