

Z+Jet

The figure displays the distribution of groomed p_{TD2} for CMS data and three Monte Carlo models: Herwig++ 2.5.0 default, Herwig 7.2.1 default, and Pythia 8.308 default. The top panel shows the distribution $\frac{1}{N} \frac{dN}{dp_T}$ versus groomed p_{TD2} . The bottom panel shows the ratio of the Monte Carlo models to the CMS data, with a yellow band indicating the ratio range and a green band indicating the ratio uncertainty.

Top Panel: Distribution of groomed p_{TD2}

Y-axis: $\frac{1}{N} \frac{dN}{dp_T}$ (ranging from 0 to 1000)

X-axis: groomed p_{TD2} (ranging from 0 to 1)

Legend:

- CMS (Black squares)
- Herwig++ 2.5.0 default (Orange dashed line with circles)
- Herwig 7.2.1 default (Green dashed line with squares)
- Pythia 8.308 default (Blue solid line with triangles)

Bottom Panel: Ratio to CMS

Y-axis: Ratio to CMS (ranging from 0.5 to 2)

X-axis: groomed p_{TD2} (ranging from 0 to 1)

The bottom panel shows the ratio of the Monte Carlo models to the CMS data. The yellow band represents the ratio range, and the green band represents the ratio uncertainty. The ratio is generally close to 1, indicating good agreement between the models and the CMS data.

Rivet 3.1.10, $\geq 300k$ events

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.5

groomed pTD2