

Jets

The figure displays two panels comparing CMS data with Herwig++ and Herwig 7.2.1 models for groomed p_{TD2} .

Top Panel: Shows the distribution of groomed p_{TD2} for CMS (black squares), Herwig++ 2.5.0 default (orange dashed line with circles), and Herwig 7.2.1 default (green dashed line with squares). The x-axis is groomed p_{TD2} (0 to 1) and the y-axis is the ratio to CMS (0.5 to 2). The Herwig 7.2.1 model shows a significant peak around 0.15, while the Herwig++ 2.5.0 model shows a peak around 0.1. The CMS data is relatively flat.

Bottom Panel: Shows the ratio of the model distributions to the CMS distribution. The x-axis is groomed p_{TD2} (0 to 1) and the y-axis is the ratio to CMS (0.5 to 2). The green band represents the ratio range for the Herwig 7.2.1 model, and the yellow band represents the ratio range for the Herwig++ 2.5.0 model. The Herwig 7.2.1 model shows a ratio range that is mostly above 1, while the Herwig++ 2.5.0 model shows a ratio range that is mostly below 1.

Rivet 3.1.10, $\geq 400\text{k}$ events

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.

groomed pTD2