

Jets

The figure displays two panels comparing CMS data with Pythia 8.308 models for groomed p_{TD2} .

Top Panel: Shows the distribution of groomed p_{TD2} for CMS (black squares) and three Pythia 8.308 models: default (blue triangles), default-noFsr (purple triangles), and default-noRap (cyan triangles). The x-axis is groomed p_{TD2} (ranging from 0 to 1), and the y-axis is $1/N \frac{dN}{d\ln(p_{TD2})}$ (ranging from 0 to 1000). The Pythia models show a peak around $p_{TD2} \approx 0.1$, while the CMS data is relatively flat.

Bottom Panel: Shows the ratio of the Pythia models to the CMS data. The x-axis is groomed p_{TD2} (ranging from 0 to 1), and the y-axis is Ratio to CMS (ranging from 0.5 to 2). The ratio is shown as a green band, and the yellow bars represent the uncertainty. The ratio is generally close to 1, indicating good agreement between the models and the CMS data.

Rivet 3.1.10, $\geq 2.2\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

2

1

10

groomed pTD2