

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 four Pythia 8.308 models (blue, red, magenta, and purple lines with triangles). The x-axis is labeled "groomed p_{TD2} " and ranges from 0 to 1. The y-axis is labeled $1/N \frac{dN}{d \ln(p_{TD2}^2 \lambda_0^2)}$ and ranges from 0 to 1000. The Pythia models show a sharp 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 labeled "groomed p_{TD2} " and ranges from 0 to 1. The y-axis is labeled "Ratio to CMS" and ranges from 0.5 to 2. The ratio is shown as a green line with a yellow shaded uncertainty band. The ratio is approximately 1.0 for $p_{TD2} > 0.2$, indicating good agreement between the models and the CMS data in this region.

Rivet 3.1.10, $\geq 2.5\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

2

0.5

groomed pTD2