

Jets

The figure displays two panels comparing CMS data with Pythia models for groomed pTD2.

Top Panel: Shows the distribution of groomed pTD2 for CMS (black squares) and four Pythia models (Pythia 6.428 345, 346, 370, and default). The x-axis is labeled "groomed pTD2" and ranges from 0 to 1. The y-axis is labeled $\frac{1}{N} \frac{dN}{d \ln(p_{TD2}^2 \lambda_0^2)}$ and ranges from 0 to 1000. The Pythia models show a peak around 0.1, while the CMS data is relatively flat.

Bottom Panel: Shows the ratio of the Pythia models to the CMS distribution. The x-axis is labeled "groomed pTD2" 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 band, indicating the range of the ratio for the four Pythia models. The ratio is generally around 1.0, with some variation at low groomed pTD2 values.

Legend:

- CMS
- Pythia 6.428 345
- Pythia 6.428 346
- △ Pythia 6.428 370
- Pythia 6.428 default

Text: CMS_2021_I1920187

Rivet 3.1.10, $\geq 2.7\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

2

0.5

groomed pTD2