

Jets

The figure displays the groomed thrust distribution and its ratio to CMS data. The top panel shows the differential event rate $\frac{dN}{d\ln(\lambda_2^1)}$ versus groomed thrust, comparing CMS data (black squares) with several Pythia 6.428 models (various colors and markers). The bottom panel shows the ratio of the model to the CMS data versus groomed thrust, with a green central band and yellow outer bands representing the uncertainty.

Top Panel: Groomed thrust λ_2^1 (CMS jet substructure)

Y-axis: $\frac{dN}{d\ln(\lambda_2^1)}$ (log scale, ranging from 1000 to 100,000)

X-axis: groomed thrust (ranging from 0 to 1)

Legend:

- CMS
- Pythia 6.428 390
- Pythia 6.428 391
- ◇ Pythia 6.428 392
- ★ Pythia 6.428 396
- ☆ Pythia 6.428 397
- ▼ Pythia 6.428 398

Bottom Panel: Ratio to CMS

Y-axis: Ratio to CMS (linear scale, ranging from 0.5 to 2.0)

X-axis: groomed thrust (ranging from 0 to 1)

The bottom panel shows the ratio of the model to the CMS data, with a green central band and yellow outer bands representing the uncertainty. The ratio is generally close to 1.0, indicating good agreement between the models and the CMS data.

Rivet 3.1.10, ≥ 2.5 M events

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.5

groomed thrust