

Jets

The figure displays the distribution of Thrust λ_2^1 (CMS jet substructure) for CMS data and Pythia 8.183 models. The x-axis represents the Thrust λ_2^1 on a logarithmic scale from 0 to 1. The top panel shows the differential event rate $\frac{dN}{d\ln\lambda_2^1}$ on a logarithmic scale from 1000 to 10000. The bottom panel shows the ratio of the Pythia models to the CMS data, with a green shaded band indicating the uncertainty.

Legend:

- CMS
- ▲ Pythia 8.183 default
- Pythia 8.183 tune-4cx

Top Panel: $\frac{dN}{d\ln\lambda_2^1}$ vs. Thrust λ_2^1 (CMS jet substructure). The CMS data (black squares) shows a sharp peak at low Thrust values. The Pythia 8.183 default (blue triangles) and Pythia 8.183 tune-4cx (orange squares) models show a broader distribution.

Bottom Panel: Ratio to CMS vs. Thrust λ_2^1 . The ratio is shown as a green shaded band, indicating the uncertainty. The ratio is generally close to 1, with some fluctuations at low Thrust values.

Source: CMS_2021_I1920187

mcplots.cern.ch [arXiv:1306.3436]

Rivet 3.1.10, $\geq 200k$ events

CMS_2021_I1920187

Ratio to CMS

thrust