

Jets

The figure displays the ratio of the differential event rate to the CMS data for the observable Thrust λ_2^1 (CMS jet substructure). The top panel shows the ratio $\frac{1}{dN} \frac{dN}{d \ln \lambda_2^1}$ versus λ_2^1 on a logarithmic scale. The bottom panel shows the ratio to CMS on a linear scale.

Top Panel: Ratio of event rate to CMS data

- Y-axis:** $\frac{1}{dN} \frac{dN}{d \ln \lambda_2^1}$ (logarithmic scale, ranging from 1000 to 10000).
- X-axis:** λ_2^1 (logarithmic scale, ranging from 0.1 to 1.0).
- Data Series:**
 - CMS:** Black squares representing experimental data points.
 - Pythia 8.170 default:** Blue line with upward-pointing triangles.
 - Pythia 8.170 tune-4cx:** Orange dashed line with open squares.
- Annotations:**
 - Top right: "Rivet 3.1.10, $\geq 300k$ events"
 - Bottom right: "mcplots.cern.ch [arXiv:1306.3436]"
 - Center: "CMS_2021_I1920187"

Bottom Panel: Ratio to CMS

- Y-axis:** Ratio to CMS (linear scale, ranging from 0.5 to 2.0).
- X-axis:** λ_2^1 (logarithmic scale, ranging from 0.1 to 1.0).
- Data Series:**
 - Pythia 8.170 default:** Green cross-shaped distribution.
 - Pythia 8.170 tune-4cx:** Yellow cross-shaped distribution.

mcplots.cern.ch [arXiv:1306.3436]

Rivet 3.1.10, $\geq 300k$ events

2

0.5

thrust