

# Jets

The figure consists of two panels sharing a common x-axis labeled 'groomed width' ranging from 0 to 1.

**Top Panel:** Displays the distribution of groomed width  $\lambda_1^1$  (CMS jet substructure). The y-axis is labeled  $\frac{dN}{d\lambda_1^1}$  and ranges from 0 to 10000. The plot shows four data series:
 

- CMS:** Black squares representing experimental data points.
- Pythia 6.428 370:** Red line with open triangles.
- Pythia 6.428 default:** Orange dashed line with open squares.
- Pythia 8.170 default:** Blue solid line with filled triangles.

 The distributions peak around a groomed width of 0.1. The Pythia 8.170 default model shows the highest peak, followed by Pythia 6.428 default, Pythia 6.428 370, and the CMS data.

**Bottom Panel:** Displays the ratio of the distributions to the CMS data. The y-axis is labeled 'Ratio to CMS' and ranges from 0.5 to 2.0. The plot shows a green shaded region representing the ratio and a yellow shaded region representing the uncertainty. The ratio is generally close to 1.0, indicating that the models are in good agreement with the CMS data.

mcplots.cern.ch [arXiv:1306.3436]

Rivet 3.1.10,  $\geq 300\text{k}$  events