

Jets

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

Top Panel: The y-axis is labeled $\frac{1}{N} \frac{dN}{d\lambda_{0.5}^1}$ and ranges from 0 to 1000. It shows the distribution of groomed LHA values. The legend includes:

- CMS (black squares)
- Pythia 6.428 346 (orange dotted line with squares)
- Pythia 6.428 347 (yellow dashed line with triangles)
- Pythia 6.428 348 (green dash-dotted line with diamonds)
- Pythia 6.428 349 (blue solid line with crosses)
- Pythia 6.428 370 (red solid line with triangles)

 The CMS data points are clustered near zero. The Pythia models show a peak around $\lambda_{0.5}^1 \approx 0.15$ and then decay. A label "Groomed LHA $\lambda_{0.5}^1$ (CMS jet substructure)" is present at the top.

Bottom Panel: The y-axis is labeled "Ratio to CMS" and ranges from 0.5 to 2. It shows the ratio of the Pythia models to the CMS data. A horizontal line is drawn at 1.0. Shaded regions (yellow and green) represent the uncertainty or range of the ratio. The ratio is generally close to 1.0 across the entire range of groomed LHA values.

Rivet 3.1.10, $\geq 2.6\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.

groomed LHA