

Jets

The figure consists of two panels sharing a common x-axis labeled "groomed LHA".

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 $\lambda_{0.5}^1$ (CMS jet substructure). The legend indicates:

- CMS:** Black solid line with square markers.
- Herwig++ 2.7.1 default:** Orange dashed line with open circle markers.
- Herwig 7.2.1 default:** Green dashed line with open square markers.

 The Herwig 7.2.1 model shows a higher peak at lower groomed LHA values compared to the other two. A grey text label "CMS_2021_16920187" is present near the bottom of the top panel.

Bottom Panel: The y-axis is labeled "Ratio to CMS" and ranges from 0.5 to 2.0. It shows the ratio of the model distributions to the CMS data. The plot features a horizontal line at 1.0 and two shaded regions: a light green band between approximately 0.9 and 1.1, and a yellow band between approximately 0.8 and 1.2. The ratio is generally close to 1.0 across the range of groomed LHA.

Rivet 3.1.10, $\geq 2.9\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

2

0.5

groomed LHA