

The figure consists of two panels sharing a common x-axis labeled "groomed width (charged-only)" ranging from 0 to 1.

Top Panel: Shows the differential event rate $\frac{1}{\#} \frac{dN}{d\lambda} \frac{d\lambda}{dp_T}$ on a logarithmic y-axis from 10^{-2} to 10^2 . The plot is for CMS, 13 TeV, AK8 jets, Z+jet region, $120 < p_T^{\text{jet}} < 150$ GeV. Data points are shown for CMS (black squares) and four Pythia 8.244 default models: default (blue solid line with triangles), default-CD (red dashed line with triangles), default-DL (magenta dashed line with triangles), and default-MBR (blue dotted line with triangles). The distribution decreases as groomed width increases.

Bottom Panel: Shows the "Ratio to CMS" on a linear y-axis from 0.5 to 2.0. It displays the ratio of the groomed width distribution for the four Pythia models to the CMS data. The ratios are generally close to 1.0, with shaded regions (yellow and green) indicating the spread of the ratios. The x-axis is the same as the top panel.

(CMS_2021_I1920187)

Rivet 4.1.0, $\geq 100\text{k}$ events

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.5

Ratio to CMS