

Z+Jet

■ CMS
 ▲ Pythia 8.308 default

CMS_2021_I1920187

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.5

groomed pTD2

The figure displays two panels comparing CMS data and Pythia 8.308 default simulation for groomed pTD2.

Top Panel: The distribution of groomed pTD2. The x-axis is labeled "groomed pTD2" and ranges from 0 to 1. The y-axis is labeled $\frac{1}{N} \frac{dN}{d\ln p_{TD2}}$ and ranges from 0 to 1000. The CMS data is shown as black squares, and the Pythia 8.308 default simulation is shown as blue triangles. The Pythia distribution peaks around 0.15, while the CMS data is much lower and flatter. A label "Groomed $(p_T^D)^2 \lambda_0^2$ (CMS jet substructure)" is present.

Bottom Panel: The ratio of the Pythia 8.308 default distribution to the CMS distribution. The y-axis is labeled "Ratio to CMS" and ranges from 0.5 to 2.0. The x-axis is labeled "groomed pTD2" and ranges from 0 to 1. The ratio is shown as a green band, which is centered around 1.0, indicating that the Pythia 8.308 default simulation is a good fit to the CMS data.