

Jets

The figure displays two panels related to the groomed thrust distribution.

Top Panel: Shows the differential event rate $\frac{dN}{d\ln(\lambda_2^1)}$ versus groomed thrust λ_2^1 (CMS jet substructure). The x-axis is logarithmic, ranging from 0.01 to 1.0. The y-axis is linear, ranging from 0 to 1000. The plot compares CMS data (black squares) with three Pythia 8.170 models: default (blue solid line with triangles), default-CD (red dashed line with triangles), and default-MBR (blue dotted line with triangles). The CMS data shows a sharp peak at low λ_2^1 values, while the models show a broader distribution. A reference line for $\frac{dN}{d\ln(\lambda_2^1)} = 1$ is shown.

Bottom Panel: Shows the ratio of the models to the CMS data, Ratio to CMS , versus groomed thrust λ_2^1 . The x-axis is logarithmic, ranging from 0.01 to 1.0. The y-axis is linear, ranging from 0.5 to 2.0. The plot compares the three models: default (blue solid line), default-CD (red dashed line), and default-MBR (blue dotted line). The ratio is generally close to 1.0, indicating good agreement between the models and the CMS data.

mcplots.cern.ch [arXiv:1306.3436]

Rivet 3.1.10, $\geq 200\text{k}$ events