

Jets

The figure displays two panels related to the distribution of thrust (charged-only) for CMS data and Pythia 6.425 and 8.308 default models.

Top Panel: The y-axis represents the distribution $\frac{dN}{d\ln \lambda_2^1}$ (charged only) (CMS jet substructure). The x-axis represents thrust (charged-only) on a logarithmic scale from 0 to 1. The plot shows three data series: CMS (black squares), Pythia 6.425 default (orange dashed line with squares), and Pythia 8.308 default (blue solid line with triangles). The CMS data shows a sharp peak around $\ln \lambda_2^1 \approx 0.1$. The Pythia 6.425 default model shows a broader peak around $\ln \lambda_2^1 \approx 0.15$. The Pythia 8.308 default model shows a peak around $\ln \lambda_2^1 \approx 0.15$ and a longer tail extending to higher values of $\ln \lambda_2^1$. A label "CMS_2021_I1920187" is present in the top right of the plot area.

Bottom Panel: The y-axis represents the Ratio to CMS. The x-axis represents thrust (charged-only) on a logarithmic scale from 0 to 1. The plot shows a horizontal line at a ratio of 1.0, indicating the ratio of the distribution to the CMS distribution. The ratio is shown for the Pythia 6.425 default model (orange dashed line) and the Pythia 8.308 default model (blue solid line). The ratio for the Pythia 6.425 default model is generally above 1.0, while the ratio for the Pythia 8.308 default model is generally below 1.0. A yellow shaded region indicates the uncertainty or variation of the ratio.

mcplots.cern.ch [arXiv:1306.3436]

Rivet 3.1.10, $\geq 400k$ events