

Jets

Figure 1 consists of two panels. The top panel is a plot of the charged-particle multiplicity distribution, showing $\frac{1}{N} \frac{dN}{d \ln(p_{TD2})}$ versus p_{TD2} (charged-only). The x-axis ranges from 0 to 1, and the y-axis ranges from 0 to 1000. The plot compares CMS data (black squares) with three Pythia 8.308 models: default (blue triangles), tune-4c (red stars), and tune-4cx (orange squares). The CMS data shows a sharp peak around $p_{TD2} \approx 0.1$. The Pythia models show a broader distribution with a peak around $p_{TD2} \approx 0.15$. The bottom panel shows the ratio of the model distributions to the CMS data, with a horizontal line at 1.0. The y-axis is 'Ratio to CMS' and ranges from 0.5 to 2.0. The ratio is mostly between 0.8 and 1.2, with some deviations at the tails.

CMS_2021_I1920187

mcplots.cern.ch [arXiv:1306.3436]

Rivet 3.1.10, $\geq 2.2\text{M}$ events