

Z+Jet

The figure displays two panels related to the distribution of p_{TD2} (charged-only) for CMS and Pythia 8.170 models.

Top Panel: Shows the distribution of p_{TD2} (charged-only) for CMS (black squares) and Pythia 8.170 default (blue triangles), Pythia 8.170 default-CD (red triangles), and Pythia 8.170 default-MBR (purple triangles). The x-axis is p_{TD2} (charged-only) ranging from 0 to 1. The y-axis is $1/N \frac{dN}{d \ln(p_{TD2})}$ ranging from 0 to 10000. The distribution is peaked around $p_{TD2} \approx 0.15$. The Pythia 8.170 default-CD model shows a slightly higher peak than the other models.

Bottom Panel: Shows the ratio of the Pythia 8.170 models to the CMS distribution. The x-axis is p_{TD2} (charged-only) ranging from 0 to 1. The y-axis is Ratio to CMS ranging from 0.5 to 2.0. The ratio is generally close to 1.0, with a slight increase for $p_{TD2} > 0.6$. The green shaded region indicates the ratio range, which is wider for $p_{TD2} > 0.6$.

mcplots.cern.ch [arXiv:1306.3436]

Rivet 3.1.10, $\geq 400k$ events

2

0.5

pTD2 (charged-only)