

The figure consists of two panels sharing a common x-axis labeled $p_{TD2} \text{ (charged-only)}$ ranging from 0 to 1.

Top Panel: Shows the differential cross-section $\frac{1}{\sigma} \frac{dN}{dp_T} \frac{d\lambda}{d\lambda}$ on a logarithmic y-axis from 10^{-2} to 10^2 . The plot compares CMS data (black squares) with the Pythia 8.201 default model (blue triangles with error bars). The distribution peaks around $p_{TD2} \approx 0.1$ and then decreases. A label f_{jet} is present in the top right corner.

Bottom Panel: Shows the ratio of the Pythia 8.201 default model to the CMS data on a linear y-axis from 0.5 to 2. The ratio is plotted as a blue line with error bars. A horizontal line at 1.0 indicates perfect agreement. Shaded regions (yellow and green) represent the uncertainty bands. The ratio starts above 2.0 at low p_{TD2} and generally decreases towards 1.0 as p_{TD2} increases.

Text in the top panel: CMS, 13 TeV, AK4 jets, central dijet region, $800 < p_{jet} < 1000 \text{ GeV}$

Text in the bottom panel: (CMS_2021_I1920187)

Text on the right side: Rivet 4.1.0, 100k events, mcplots.cern.ch [arXiv:2401.10621]

(CMS_2021_I1920187)

Rivet 4.1.0, 100k events

mcplots.cern.ch [arXiv:2401.10621]

2

1

0.5

Ratio to CMS

pTD2 (charged-only)