

The figure displays two panels for dijet production at 13 TeV, focusing on the central region ($88 < p_{T}^{\text{jet}} < 120$ GeV).

Top Panel: Shows the differential cross-section $\frac{1}{\sigma} \frac{dN}{dp_T} \frac{d\lambda}{d\lambda}$ on a logarithmic scale (from 10^{-2} to 10^2) versus p_{T}^{jet} (from 0 to 1.0 GeV). The data points (black squares) represent CMS measurements. Theoretical predictions are shown for Herwig 7.2.1 default (green dashed line with open squares) and Sherpa 1.4.5 default (red dotted line with red diamonds). The cross-section peaks around $p_{T}^{\text{jet}} \approx 0.1$ GeV and then decreases.

Bottom Panel: Shows the ratio of the cross-section to the CMS measurement, Ratio to CMS , on a linear scale (from 0.5 to 2.0) versus p_{T}^{jet} . The ratio is plotted for the same theoretical models. The ratio is generally close to 1.0, indicating good agreement with the CMS data. Shaded regions (yellow and green) represent the uncertainty bands for the theoretical predictions.

Source: (CMS_2021_I1920187)

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mcplots.cern.ch [arXiv:2401.10621]

2

1

0.5

pTD2 (charged-only)