

The figure consists of two panels sharing a common x-axis labeled "groomed pTD2" 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^{-1} to 10^2 . The data points are from CMS (black squares) and the theoretical predictions are from Pythia 6.426 ambt1 (orange triangles) and Pythia 6.426 z2 (green circles). The distribution peaks at low groomed pTD2 values and then decreases. A text label "(CMS_2021_I1920187)" is present in the plot area.

Bottom Panel: Shows the "Ratio to CMS" on a linear y-axis from 0.5 to 2.0. It displays the ratio of the theoretical predictions to the CMS data. The ratio is shown with error bars and shaded regions (yellow for the 1-sigma range, green for the 2-sigma range). The ratio starts around 1.4 at low groomed pTD2, dips to about 0.8, and then rises back towards 1.2 at higher groomed pTD2 values.

Text Labels:

- Top right: "CMS, 13 TeV, AK4 jets, forward dijet region, $800 < p_T^{\text{jets}} < 1000$ GeV"
- Right side (vertical): "Rivet 4.1.0, $\geq 100k$ events"
- Right side (vertical): "mcplots.cern.ch [arXiv:2401.10621]"

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(CMS_2021_I1920187)

Ratio to CMS

groomed pTD2

