

The figure displays two panels for dijet production in the forward region, defined by  $614 < p_T^{\text{jets}} < 800$  GeV, using CMS data from 13 TeV collisions with AK8 jets.

**Top Panel:** Shows the differential cross-section  $\frac{1}{\#} \frac{dN}{dp_T} \frac{d\lambda}{d\lambda}$  on a logarithmic scale (from  $10^{-2}$  to  $10^3$ ) versus the groomed thrust (charged-only) on a linear scale (from 0 to 1). The data points are from CMS (black squares), Herwig++ 2.7.1 default (orange dashed line with circles), and Herwig 7.2.1 default (green dashed line with squares). The cross-section decreases as the groomed thrust increases.

**Bottom Panel:** Shows the ratio of the cross-section to the CMS data,  $\text{Ratio to CMS}$ , on a linear scale (from 0.5 to 2) versus the groomed thrust (charged-only) on a linear scale (from 0 to 1). The ratio is plotted for the same three models. Shaded regions (yellow for Herwig++ and green for Herwig) indicate the uncertainty bands. The ratios are generally close to 1, indicating good agreement with the CMS data.

Source: (CMS\_2021\_I1920187)

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mcplots.cern.ch [arXiv:2401.10621]

2

1

0.5

groomed thrust (charged-only)