

CMS, 13 TeV, AK4 jets, central dijet region,  $120 < p_T^{\text{dijet}} < 150$  GeV  
 Rivet 4.1.0,  $\geq 50k$  events  
 mcplots.cern.ch [arXiv:1306.3436]  
 (CMS\_2021\_I1920187)

The top panel shows the differential event rate  $\frac{1}{\lambda} \frac{dN}{dp_T d\lambda}$  on a logarithmic scale (from  $10^{-6}$  to  $10^{-1}$ ) versus the groomed multiplicity  $p_T$  (from 0 to 80). The data points are from CMS (black squares) and several Pythia 6.427 models: Pythia 6.427 359 (blue dashed line with squares), Pythia 6.427 370 (red solid line with triangles), Pythia 6.427 a (green solid line with triangles), Pythia 6.427 dw (green dashed line with inverted triangles), Pythia 6.427 p0 (black solid line with circles), and Pythia 6.427 pro-q2o (green dotted line with stars).

The bottom panel shows the ratio of the groomed multiplicity distribution to the CMS data on a linear scale (from 0.5 to 2.5) versus groomed multiplicity (from 0 to 80). The ratio is shown for the same models as the top panel. Shaded regions indicate the ratio's range: yellow for  $0.8 < \text{Ratio} < 1.2$  and green for  $0.5 < \text{Ratio} < 2.5$ .