

Figure 1 consists of two panels. The top panel shows the distribution of groomed multiplicity (N_g) for CMS data and several Pythia models. The x-axis is groomed multiplicity, ranging from 0 to 150. The y-axis is the differential count $\frac{dN}{dp_T d\lambda}$ on a logarithmic scale from 10^{-6} to 1. The legend identifies the series: CMS (black squares), Pythia 6.428 370 (red triangles), Pythia 6.428 391 (grey squares), Pythia 6.428 default (orange squares), and Pythia 8.165 default (blue triangles). The bottom panel shows the ratio of these distributions to the CMS distribution. The x-axis is groomed multiplicity, ranging from 0 to 150. The y-axis is the ratio to CMS on a linear scale from 0.5 to 2. The legend identifies the series: CMS (black squares), Pythia 6.428 370 (red triangles), Pythia 6.428 391 (grey squares), Pythia 6.428 default (orange squares), and Pythia 8.165 default (blue triangles). The bottom panel also features a green shaded region for the 100k events Rivet distribution and a yellow shaded region for the 100k events Rivet distribution.

(CMS_2021_I1920187)

mcplots.cern.ch [arXiv:2401.10621]

2

1

0.5

groomed multiplicity