

## Jets

Figure 1: Comparison of groomed width distributions for CMS, Herwig 7.2.1, and Pythia 8.308. The top panel shows the distribution of groomed width  $\lambda_1^1$  (CMS jet substructure) for 13 TeV pp collisions. The bottom panel shows the ratio of the distributions to the CMS distribution. The x-axis is groomed width (0 to 1). The top y-axis is  $dN/d\ln\lambda_1^1$  (0 to 10000). The bottom y-axis is Ratio to CMS (0.5 to 2). The legend indicates: CMS (black squares), Herwig 7.2.1 default (green dashed line with open squares), and Pythia 8.308 default (blue solid line with solid triangles). The CMS distribution is a flat line at y=1. The Herwig and Pythia distributions peak at low groomed width and then decay. The Pythia distribution is broader than the Herwig distribution. The ratio plot shows that the Herwig distribution is generally higher than the CMS distribution, while the Pythia distribution is closer to the CMS distribution.

Rivet 3.1.10,  $\geq 1.8\text{M}$  events

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.

groomed width