

Jets

Rivet 3.1.10, $\geq 2.4\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.5

pTD2

 $\mathbf{d}^N$

↙

Ratio to CMS

The figure displays the ratio of Pythia 6.428 models to CMS data for the observable $(p_T^D)^2 \lambda_0^2$ (CMS jet substructure). The x-axis for both panels is p_{TD2} , ranging from 0 to 1.0.

The top panel shows the distribution of the ratio $1/N \frac{dN}{dp_T}$ for three models: CMS (black squares), Pythia 6.428 370 (red triangles), and Pythia 6.428 default (orange squares). The distribution is peaked around $p_{TD2} \approx 0.1$. The Pythia 6.428 370 model shows a higher ratio than the default model in the peak region.

The bottom panel shows the ratio of the Pythia 6.428 models to the CMS data, plotted as a stacked histogram. The green band represents the ratio of the Pythia 6.428 370 model to the CMS data, and the yellow band represents the ratio of the Pythia 6.428 default model to the CMS data. The ratio is generally close to 1.0, with some deviations in the peak region.