

Jets

Rivet 3.1.10, $\geq 2.6\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

2

0.5

pTD2

$$\frac{\mathbf{d}N}{dt} = \mathbf{m}n\mathbf{d}$$

→

Ratio to CMS

The figure displays the distribution of the observable $(p_T^D)^2 \lambda_0^2$ (CMS jet substructure) for the process $pp \rightarrow t\bar{t} + \text{jet}$ at $\sqrt{s} = 13$ TeV. The top panel shows the normalized distribution $1/N \frac{dN}{d \ln(p_T^D)^2 \lambda_0^2}$ versus p_{TD2} (ranging from 0 to 1). The CMS data (black squares) is compared with three Pythia 6.428 models: Pythia 6.428 370 (red triangles), Pythia 6.428 378 (blue stars), and Pythia 6.428 379 (green stars). The bottom panel shows the ratio of the model distributions to the CMS data, with a green shaded band indicating the ratio range and a yellow shaded band indicating the uncertainty. The x-axis for both panels is p_{TD2} , ranging from 0 to 1. The top panel y-axis ranges from 0 to 8000, and the bottom panel y-axis ranges from 0.5 to 2.0.