

Jets

Rivet 3.1.10, $\geq 2.5\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.5

pTD2

The figure displays the distribution of the observable $(p_T^D)^2 \lambda_0^2$ (CMS jet substructure) for the CMS data and several Pythia models. The x-axis represents the observable value, ranging from 0 to 1. The y-axis represents the distribution $\frac{dN}{d \ln(p_T^D)^2 \lambda_0^2}$, ranging from 0 to 10000.

The top panel shows the distribution for the following models:

- CMS (Black squares)
- Pythia 6.428 370 (Red triangles)
- Pythia 6.428 391 (Grey squares)
- Pythia 6.428 default (Orange squares)
- Pythia 8.308 default (Blue triangles)

The bottom panel shows the ratio of the Pythia models to the CMS data, with a green band indicating the ratio range and a yellow band indicating the uncertainty. The ratio is generally close to 1, indicating good agreement between the models and the CMS data.