

Jets

Rivet 3.1.10, $\geq 2.8\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

2

0.5

pTD2

 $\mathbf{d}^N$

←

Ratio to CMS

Figure 1 displays the distribution of the dimensionless variable $(p_T^D)^2 \lambda_0^2$ (CMS jet substructure) for the CMS data and three Pythia 8.308 models. The top panel shows the distribution $\frac{dN}{d \ln(p_T^D)^2 \lambda_0^2}$ versus p_{TD2} (ranging from 0 to 1). The bottom panel shows the ratio of the Pythia models to the CMS distribution, with a green band indicating the ratio and yellow bars showing the uncertainty.

The legend indicates the following models:

- CMS (Black squares)
- Pythia 8.308 default (Blue triangles)
- Pythia 8.308 default-noFsr (Purple triangles)
- Pythia 8.308 default-noRap (Cyan triangles)

The bottom panel also includes a green band representing the ratio of the Pythia models to the CMS distribution, and yellow bars indicating the uncertainty. The x-axis is labeled p_{TD2} and ranges from 0 to 1. The y-axis for the top panel is $\frac{dN}{d \ln(p_T^D)^2 \lambda_0^2}$ and ranges from 0 to 1000. The y-axis for the bottom panel is the ratio to CMS, ranging from 0.5 to 2.0.