

Jets

Rivet 3.1.10, 2.6M events

mcplots.cern.ch [arXiv:1306.3436]

2

0.5

pTD2

The figure consists of two panels sharing a common x-axis labeled p_{TD2} ranging from 0 to 1.

Top Panel: Shows the distribution of p_{TD2} for two models. The y-axis is labeled $\frac{1}{N} \frac{dN}{dp_{TD2}}$ and ranges from 0 to 1000. The legend indicates:

- CMS:** Represented by black squares, showing a very low, flat distribution near zero.
- Pythia 8.308 default:** Represented by blue triangles connected by a line, showing a sharp peak around $p_{TD2} \approx 0.1$ with a value of approximately 700, and then decaying towards zero.

 The text $(p_T^D)^2 \lambda_0^2$ (CMS jet substructure) is displayed at the top.

Bottom Panel: Shows the ratio of the Pythia 8.308 default distribution to the CMS distribution. The y-axis is labeled "Ratio to CMS" and ranges from 0.5 to 2. The plot features a green shaded region representing the ratio distribution, which is centered around 1.0 for $p_{TD2} > 0.2$ and shows more variation at lower p_{TD2} values. A horizontal line is drawn at Ratio = 1.0.