

Jets

The figure displays the multiplicity distribution of jets in CMS data and Monte Carlo models. The top panel shows the normalized distribution $\frac{1}{N} \frac{dN}{dp_T}$ versus multiplicity. The bottom panel shows the ratio of the Monte Carlo distributions to the CMS data, with yellow bars for the ratio and green bars for the uncertainty.

Top Panel: Multiplicity λ_0^0 (CMS jet substructure)

Legend:

- CMS (Black squares)
- Herwig 7.2.1 softTune (Teal inverted triangles)
- Pythia 6.428 370 (Red open triangles)
- Pythia 8.308 default (Blue triangles)

Bottom Panel: Ratio to CMS

The bottom panel shows the ratio of the Monte Carlo distributions to the CMS data. The yellow bars represent the ratio, and the green bars represent the uncertainty. The ratio is generally close to 1, indicating good agreement between the Monte Carlo models and the CMS data.

Y-axis Labels:

- Top Panel: $\frac{1}{N} \frac{dN}{dp_T}$
- Bottom Panel: Ratio to CMS

X-axis Label: multiplicity

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

mcplots.cern.ch [arXiv:1306.3436]

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