

Jets

The figure displays the multiplicity distribution of jets in CMS data and Pythia simulations. The top panel shows the differential event rate $\frac{dN}{d\lambda_0^0}$ versus multiplicity. The bottom panel shows the ratio of the simulation to the CMS data, with yellow bars indicating the ratio and green shading indicating the uncertainty.

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

Legend:

- CMS
- △ Pythia 6.428 370
- ★ Pythia 6.428 378
- ★ Pythia 6.428 379

Bottom Panel: Ratio to CMS

The ratio to CMS is shown as a stacked histogram. The yellow bars represent the ratio, and the green shading represents the uncertainty. The ratio is approximately 1.0 for multiplicities up to 40, and then increases significantly for higher multiplicities.

Y-axis Labels:

- Top: $\frac{dN}{d\lambda_0^0}$
- Bottom: Ratio to CMS

X-axis Label: multiplicity

Text in Plot: CMS_2021_I1920187

Rivet 3.1.10, $\geq 2.9\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

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0.

multiplicity