

Jets

The figure displays the multiplicity distribution of charged particles in CMS jet substructure, comparing experimental data (CMS) with a model fit (MC) and its ratio to the CMS data.

Top Panel: The y-axis represents the multiplicity distribution $\frac{1}{N} \frac{dN}{dp_T d\lambda_0^0}$ (charged only) on a logarithmic scale from 10^{-10} to 10^0 . The x-axis represents the multiplicity (charged-only) from 0 to 100. The data points (black squares) show a peak around multiplicity 20. The label "Multiplicity λ_0^0 (charged only) (CMS jet substructure)" is present. A legend indicates "CMS" for the data points. The text "(CMS_2021_I1920187)" is also visible.

Bottom Panel: The y-axis represents the ratio of the multiplicity distribution to the CMS distribution, $\frac{\text{Ratio to CMS}}$, on a linear scale from 0.5 to 2. The x-axis represents the multiplicity (charged-only) from 0 to 100. The plot shows a green shaded region representing the ratio of the model fit to the CMS data. The ratio is generally close to 1 for multiplicities up to about 40, then increases significantly, reaching a value of 2 for multiplicities greater than 60.

mcplots.cern.ch [arXiv:1306.3436]