

Jets

Figure 1: Multiplicity λ_0^0 (CMS jet substructure)

The figure displays the multiplicity distribution of λ_0^0 particles in CMS jet substructure. The top panel shows the normalized multiplicity distribution $\frac{1}{N} \frac{dN}{dp_T}$ for four different models: CMS (black squares), Herwig++ 2.7.1 default (orange dashed line with open circles), Herwig 7.2.1 default (green dashed line with open squares), and Pythia 8.308 default (blue solid line with solid triangles). The x-axis represents multiplicity (0 to 60) and the y-axis represents $\frac{1}{N} \frac{dN}{dp_T}$ (0 to 100). The bottom panel shows the ratio of the model distributions to the CMS data, with a yellow shaded region indicating the ratio between 0.5 and 1.5, and a green shaded region indicating the ratio above 1.5. The x-axis represents multiplicity (0 to 60) and the y-axis represents the ratio to CMS (0.5 to 2.5). A horizontal line is drawn at a ratio of 1.0. The plot is titled "Multiplicity λ_0^0 (CMS jet substructure)" and includes a reference to "CMS_2021_1920187".

A vertical number line with tick marks at 0, 1, and 2.

multiplicity