

Jets

Figure 1 consists of two panels. The top panel is a line plot showing the multiplicity distribution $\frac{1}{N} \frac{dN}{d\lambda_0}$ versus multiplicity λ_0 . The x-axis ranges from 0 to 100, and the y-axis ranges from 0 to 140. The plot compares CMS data (black squares) with two Monte Carlo models: Herwig++ 2.5.0 default (orange dashed line with open circles) and Herwig 7.2.1 default (green dashed line with open squares). The Herwig++ model shows a peak around $\lambda_0 \approx 25$ with a value of approximately 65, while the Herwig 7.2.1 model shows a peak around $\lambda_0 \approx 35$ with a value of approximately 60. The CMS data points are clustered at low multiplicities, with a small peak around $\lambda_0 \approx 10$ and a long tail extending to $\lambda_0 = 100$. The bottom panel is a stacked histogram showing the ratio of the Monte Carlo models to the CMS data, $\frac{\text{Model}}{\text{CMS}}$, versus multiplicity. The x-axis ranges from 0 to 100, and the y-axis ranges from 0.5 to 2.5. The histogram is divided into two regions: a yellow region for $\lambda_0 < 50$ and a green region for $\lambda_0 \geq 50$. The yellow region shows a ratio between 0.7 and 1.5, while the green region shows a ratio between 1.0 and 2.5. A horizontal line at $y = 1.0$ indicates the ratio of the models to the CMS data.

mcplots.cern.ch [arXiv:1306.3436]

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multiplicity