

Z+Jet

Figure 1 consists of two panels. The top panel is a plot of the distribution of the width of the first jet substructure, λ_1 , for CMS data and two Herwig++ models. The x-axis is labeled 'width' and ranges from 0 to 1. The y-axis is labeled $\frac{1}{N} \frac{dN}{d\lambda_1}$ and ranges from 0 to 1000. The legend indicates three data series: CMS (black squares), Herwig++ 2.7.1 default (orange dashed line with open circles), and Herwig 7.2.1 default (green dashed line with open squares). The CMS data shows a sharp peak at $\lambda_1 \approx 0.15$. The Herwig++ 2.7.1 default model shows a broader peak at $\lambda_1 \approx 0.15$. The Herwig 7.2.1 default model shows a peak at $\lambda_1 \approx 0.15$ that is slightly higher than the Herwig++ 2.7.1 default model. The bottom panel is a plot of the ratio of the distribution to the CMS distribution, $\frac{1}{N} \frac{dN}{d\lambda_1} / \frac{1}{N} \frac{dN}{d\lambda_1}^{\text{CMS}}$, for the same three data series. The x-axis is labeled 'width' and ranges from 0 to 1. The y-axis is labeled 'Ratio to CMS' and ranges from 0.5 to 2. The CMS data is represented by a horizontal line at 1.0. The Herwig++ 2.7.1 default model is represented by a yellow shaded region, and the Herwig 7.2.1 default model is represented by a green shaded region. The Herwig++ 2.7.1 default model shows a ratio that is mostly between 0.8 and 1.2, with a slight increase at $\lambda_1 \approx 0.15$. The Herwig 7.2.1 default model shows a ratio that is mostly between 0.8 and 1.2, with a slight increase at $\lambda_1 \approx 0.15$.

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