

Z+Jet

Figure 1 consists of two panels. The top panel is a plot of the groomed LHA $\lambda_{0.5}^1$ (CMS jet substructure) for different Monte Carlo models. The x-axis is labeled 'groomed LHA' and ranges from 0 to 1. The y-axis is labeled 'mathrm d N / mathrm d p_T mathrm d lambda_{0.5}^1' and ranges from 0 to 1000. The plot shows four data series: CMS (black squares), Herwig++ 2.7.1 default (orange dashed line with circles), Herwig 7.2.1 default (green dashed line with squares), and Herwig 7.2.1 softTune (blue solid line with triangles). The CMS data points are clustered at low groomed LHA values (around 0.1 to 0.2). The Herwig models show a broader distribution, peaking around 0.15 to 0.2 and then decreasing. The Herwig 7.2.1 softTune model shows the best agreement with the CMS data at low groomed LHA values.

The bottom panel is a histogram showing the ratio of the Herwig models to the CMS data. The x-axis is labeled 'groomed LHA' and ranges from 0 to 1. The y-axis is labeled 'Ratio to CMS' and ranges from 0.5 to 2. The histogram is divided into two regions: yellow for Herwig++ and green for Herwig 7.2.1. The ratio is generally close to 1, indicating good agreement with the CMS data, but shows some deviations at higher groomed LHA values.

Rivet 3.1.10, $\geq 2.3\text{M}$ events