

Z+Jet

Figure 1 consists of two panels. The top panel is a plot of the distribution of $\lambda_{0.5}^1$ (CMS jet substructure) for 13 TeV pp collisions. The x-axis is labeled 'LHA' and ranges from 0 to 1. The y-axis is labeled '1/N dN/dln lambda' and ranges from 0 to 1000. The plot shows two distributions: 'CMS' (black solid line with square markers) and 'Herwig 7.2.1 default' (green dashed line with square markers). The Herwig distribution is significantly higher than the CMS distribution, peaking at approximately 1000 at $\lambda_{0.5}^1 \approx 0.25$. The CMS distribution is very low, near zero. The bottom panel is a plot of the 'Ratio to CMS' on the y-axis (ranging from 0.5 to 2) versus 'LHA' on the x-axis (ranging from 0 to 1). The ratio is shown as a green shaded band, indicating the relative difference between the Herwig and CMS distributions. The ratio is mostly between 1 and 1.5, with a slight increase towards higher $\lambda_{0.5}^1$ values.

Rivet 3.1.10, 2.6M events

mcplots.cern.ch [arXiv:1306.3436]

2

0.5

LHA