

Jets

Figure 1 consists of two panels. The top panel is a plot of the width of the first jet substructure, λ_1 , in units of CMS jet substructure. The x-axis is labeled 'width' and ranges from 0 to 1. The y-axis is labeled 'dN/dln width' and ranges from 0 to 1000. The plot shows three distributions: CMS (black solid line with square markers), Herwig++ 2.6.1a default (orange dashed line with open circles), and Herwig 7.2.1 default (green dashed line with open squares). The CMS distribution is a sharp peak at width = 0. The Herwig++ distribution is a broader peak at width ≈ 0.1. The Herwig 7.2.1 distribution is a broader peak at width ≈ 0.15. The bottom panel is a plot of the ratio of the width to the CMS distribution, 'Ratio to CMS', ranging from 0.5 to 2. The x-axis is labeled 'width' and ranges from 0 to 1. The plot shows a horizontal line at Ratio to CMS = 1.0, with a yellow shaded band representing the ratio of the Herwig++ distribution to the CMS distribution and a green shaded band representing the ratio of the Herwig 7.2.1 distribution to the CMS distribution. The yellow band is centered around 1.0, and the green band is centered around 1.0.

Rivet 3.1.10, $\geq 400k$ events

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.5

width