

Jets

Rivet 3.1.10, $\geq 300k$ events

mcplots.cern.ch [arXiv:1306.3436]

2

0.5

pTD2

The figure displays two panels comparing CMS data with Herwig++ and Herwig 7.2.1 models for the observable $(p_T^D)^2 \lambda_0^2$ (CMS jet substructure).

Top Panel: Shows the differential event rate $\frac{dN}{dp_T^D d\lambda_0^2}$ on a logarithmic scale (Y-axis, ranging from 10^3 to 10^5). The X-axis is p_{TD2} (ranging from 0 to 1). The legend indicates:

- CMS:** Black squares.
- Herwig++ 2.5.0 default:** Orange dashed line with circles.
- Herwig 7.2.1 default:** Green dashed line with squares.

The top panel also includes a label $(p_T^D)^2 \lambda_0^2$ (CMS jet substructure) and a reference to CMS_2021_I1920187.

Bottom Panel: Shows the Ratio to CMS (Y-axis, ranging from 0.5 to 2.0) versus p_{TD2} (X-axis, ranging from 0 to 1). The plot displays the ratio of the Herwig++ and Herwig 7.2.1 models to the CMS data. The ratio is generally close to 1, indicating good agreement, with some deviations at lower p_{TD2} values. The bottom panel also includes a reference to mcplots.cern.ch [arXiv:1306.3436].