

Jets

The figure displays the distribution of groomed p_{TD2} for CMS data and two Herwig models, along with their ratio to the CMS data.

Top Panel: Groomed p_{TD2} Distribution

The x-axis represents groomed p_{TD2} on a logarithmic scale from 0 to 1. The y-axis represents the distribution $\frac{1}{N} \frac{dN}{d \ln p_{TD2}}$ on a logarithmic scale from 1000 to 10000. The legend indicates:

- CMS**: Black squares
- Herwig++ 2.7.1 default**: Orange dashed line with open circles
- Herwig 7.2.1 default**: Green dashed line with open squares
- Herwig 7.2.1 softTune**: Teal solid line with filled triangles

The CMS data shows a sharp peak around $p_{TD2} \approx 0.1$. The Herwig++ model shows a broader peak around $p_{TD2} \approx 0.15$. The Herwig 7.2.1 default model shows a peak around $p_{TD2} \approx 0.1$, similar to the CMS data. The Herwig 7.2.1 softTune model shows a peak around $p_{TD2} \approx 0.1$, similar to the CMS data.

Bottom Panel: Ratio to CMS

The x-axis represents groomed p_{TD2} on a logarithmic scale from 0 to 1. The y-axis represents the ratio to CMS, ranging from 0.5 to 2. The plot shows a green band representing the ratio of the Herwig models to the CMS data, and a yellow band representing the uncertainty. The ratio is generally close to 1, indicating good agreement with the CMS data.

Rivet 3.1.10, $\geq 2.9\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

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groomed pTD2