

Top Panel: Differential event rate $\frac{1}{\#} \frac{dN}{dp_T d\lambda}$ versus width. The y-axis is logarithmic, ranging from 10^{-3} to 10^2 . The x-axis is linear, ranging from 0 to 1. Data points are shown for CMS (black squares), Epos 1.99.crmc.1.6.0 default (red dotted line with crosses), Epos 1.99.crmc.1.6.0 lhcb (red solid line with crosses), and Pythia 8.201 default (blue line with triangles). The CMS data shows a decreasing trend as width increases. The Epos and Pythia models provide a smooth fit to the data.

Bottom Panel: Ratio of the model to the CMS data versus width. The y-axis is linear, ranging from 0.5 to 2. The x-axis is linear, ranging from 0 to 1. The ratio is shown for the Pythia 8.201 default model (blue line with triangles). The ratio fluctuates around 1, indicating a good fit to the CMS data. Shaded regions (yellow and green) represent the uncertainty bands of the model.

Legend:

- CMS
- ⋈ Epos 1.99.crmc.1.6.0 default
- ⋈ Epos 1.99.crmc.1.6.0 lhcb
- ▲ Pythia 8.201 default

Text in the plot: (CMS_2021_I1920187)

Text on the right side: Rivet 4.1.0, ≥ 100k events, mcplots.cern.ch [arXiv:1306.3436]

(CMS_2021_I1920187)

mcplots.cern.ch [arXiv:1306.3436]

2

0.5

width