

Jet Charge Q_T ($\kappa=0.6$, $1000 < p_T$, $|\eta| < 1.5$)

- CMS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.201 default

 $1/N \frac{dN}{dQ_{T,1}^{0.6}} [1/e]$

12

10

8

6

4

2

0

2

1

0.5

Rivet 3.1.0, $\geq 5M$ events

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.5

Ratio to CMS

$Q_{T,1}^{\kappa=0.6} [e]$

The figure displays the distribution of the first jet charge $Q_{T,1}$ for jets with $1000 < p_T < 1.5$ and $|\eta| < 1.5$ at $\sqrt{s} = 8000$ GeV. The top panel shows the distribution $1/N \frac{dN}{dQ_{T,1}^{0.6}} [1/e]$ for three different models: CMS (black squares), Herwig 7.2.0 default (green dashed line with squares), and Pythia 8.201 default (blue solid line with triangles). The bottom panel shows the ratio of the distributions to the CMS distribution, with a horizontal line at 1.0. The ratio is shown as a blue line with triangles and a green dashed line with squares, overlaid on a background of green and yellow shaded regions. The x-axis for both panels is $Q_{T,1}^{\kappa=0.6} [e]$, ranging from -0.5 to 0.5. The y-axis for the top panel ranges from 0 to 12, and for the bottom panel from 0.5 to 2.0.