

Gap fraction vs p_T (FB) ($4 < \Delta y < 5$)

Gap fraction

- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.201 default
- - ◆ Sherpa 2.1.0 default

2.5

2

1.5

1

0.5

0

2

1

0.5

Rivet 3.1.0, $\geq 100k$ events

mcplots.cern.ch [arXiv:1306.3436]

ATLAS_2011_S9126244

Ratio to ATLAS

2

1

0.5

100

200

300

\overline{P}_T [GeV]

The figure displays the gap fraction and its ratio to ATLAS as a function of the average transverse momentum \overline{P}_T for jets in the forward-backward region ($4 < \Delta y < 5$) at 7000 GeV pp collisions. The top panel shows the gap fraction (0 to 2.5) and the bottom panel shows the ratio to ATLAS (0.5 to 2). Data points are shown for ATLAS (black squares), Herwig 7.2.0 default (green dashed line with squares), Pythia 8.201 default (blue solid line with triangles), and Sherpa 2.1.0 default (red dotted line with diamonds). The ATLAS data points are scattered around a ratio of 1.0, while the Monte Carlo models show a clear trend of increasing ratio with \overline{P}_T . The x-axis ranges from 0 to 400 GeV, and the y-axes range from 0.5 to 2.5.