

Gap fraction

Gap fraction vs Δy (FB) ($210 < p_T < 240$ ($Q_0 = \bar{p}_T$))

- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.210 default
- - ◆ Sherpa 1.4.2 default

2

1.5

1

0.5

0

ATLAS_2011_S9126244

Rivet 3.1.0, $\geq 100k$ events

mcplots.cern.ch [arXiv:1306.3436]

Ratio to ATLAS

2

1

0.5

2

0.5

0

2

4

6

$|\Delta y|$

The figure consists of two vertically stacked panels sharing a common x-axis representing the rapidity difference $|\Delta y|$ from 0 to 6. The top panel shows the 'Gap fraction' on the y-axis (0 to 2). The bottom panel shows the 'Ratio to ATLAS' on the y-axis (0.5 to 2). Both panels include data points with error bars for ATLAS (black squares) and three Monte Carlo models: Herwig 7.2.0 (green dashed line with open squares), Pythia 8.210 (blue solid line with solid triangles), and Sherpa 1.4.2 (red dotted line with solid diamonds). The ATLAS data points are generally consistent with the models, showing a slight decrease in gap fraction as $|\Delta y|$ increases. The bottom panel also features a background of colored histograms (yellow and green) representing the distribution of the ratio to ATLAS for the models.