

Gap fraction

Gap fraction vs Δy (FB) ($240 < p_T < 270$ ($Q_0 = \bar{p}_T$))

- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.212 default
- - ◆ Sherpa 1.4.5 default

2.5

2

1.5

1

0.5

0

2

1

0.5

0

Rivet 3.1.0, $\geq 100k$ events

mcplots.cern.ch [arXiv:1306.3436]

ATLAS_2011_S9126244

Ratio to ATLAS

2

1

0.5

0

2

4

6

$|\Delta y|$

The figure consists of two vertically stacked panels sharing a common x-axis representing the absolute rapidity difference $|\Delta y|$ from 0 to 6. The top panel shows the 'Gap fraction' on the left y-axis (0 to 2.5) and the number of events on the right y-axis (0 to 100k). The bottom panel shows the 'Ratio to ATLAS' on the left y-axis (0.5 to 2) and the number of events on the right y-axis (0 to 2). Both panels feature four data series: ATLAS (black squares), Herwig 7.2.0 (green dashed line with squares), Pythia 8.212 (blue solid line with triangles), and Sherpa 1.4.5 (red dotted line with diamonds). Error bars are included for all data points. The bottom panel also includes a green shaded histogram and a yellow shaded histogram, representing event distributions for different models or conditions. A horizontal line is drawn at a ratio of 1.0 in the bottom panel. The text 'ATLAS_2011_S9126244' is centered in the top panel.

$ \Delta y $	ATLAS Gap Fraction	Herwig 7.2.0 Gap Fraction	Pythia 8.212 Gap Fraction	Sherpa 1.4.5 Gap Fraction
0.2	1.0	1.0	1.0	1.0
0.8	0.95	0.95	0.95	0.95
1.4	0.95	0.95	0.95	0.95
1.8	0.9	0.9	0.95	0.95
2.2	0.9	0.9	0.95	0.9
2.6	0.85	0.85	0.85	0.9
3.0	0.85	0.85	0.8	0.85
3.4	0.8	0.85	0.65	0.85
3.8	0.75	0.85	0.6	0.85
4.2	0.7	0.7	0.7	0.7
4.6	0.6	0.45	0.55	0.8
5.0	0.4	0.2	0.55	0.8
5.4	0.2	0.2	1.0	1.0