

Gap fraction

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

- ATLAS
- - □ Herwig 7.2.0 default
- - ◆ Sherpa 1.3.0 default

2.5

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

1

0.5

0

2

4

6

$|\Delta y|$

The figure displays two panels. The top panel shows the gap fraction (y-axis, 0 to 2.5) versus the absolute rapidity difference $|\Delta y|$ (x-axis, 0 to 6). It compares ATLAS experimental data (black squares) with Herwig 7.2.0 (green dashed line with squares) and Sherpa 1.3.0 (red dotted line with diamonds) models. The bottom panel shows the ratio of the gap fraction to the ATLAS data (y-axis, 0.5 to 2) versus $|\Delta y|$ (x-axis, 0 to 6). This panel includes the same data points and models as the top panel, along with a horizontal line at a ratio of 1.0 and a 2D histogram (shaded green and yellow) representing the distribution of the ratio to ATLAS.

$ \Delta y $	ATLAS Gap Fraction	Herwig 7.2.0 Gap Fraction	Sherpa 1.3.0 Gap Fraction	Ratio to ATLAS
0.5	1.0	1.0	1.0	1.0
1.0	0.95	0.95	0.95	1.0
1.5	0.95	0.95	0.95	1.0
2.0	0.9	0.85	0.95	1.0
2.5	0.85	0.85	0.85	1.0
3.0	0.8	0.75	0.9	1.1
3.5	0.8	0.6	0.85	1.1
4.0	0.65	0.65	0.65	1.0
4.5	0.45	0.4	0.8	1.8
5.0	0.3	0.3	1.0	3.0
5.5	0.0	-	-	-