

Gap fraction

Gap fraction vs Δy (FB) ($70 < p_T < 90$ ($Q_0 = \bar{p}_T$))

- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.170 default

2

1.8

1.6

1.4

1.2

1.0

0.8

0.6

0.4

0.2

2

1

0.5

Rivet 3.1.0, $\geq 100k$ events

mcplots.cern.ch [arXiv:1306.3436]

ATLAS_2011_S9126244

Ratio to ATLAS

2

$|\Delta y|$

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 left y-axis (0.2 to 2.0) and the 'Ratio to ATLAS' on the right y-axis (0.5 to 2.0). The bottom panel shows the 'Ratio to ATLAS' on the left y-axis (0.5 to 2.0) and the 'Ratio to ATLAS' on the right y-axis (0.5 to 2.0). The top panel data points are: ATLAS (black squares), Herwig 7.2.0 default (green dashed line with open squares), and Pythia 8.170 default (blue solid line with solid triangles). The bottom panel data points are: Herwig 7.2.0 default (green dashed line with open squares) and Pythia 8.170 default (blue solid line with solid triangles). A yellow shaded region is present in the bottom panel, centered around a ratio of 1.0. Error bars are shown for all data points.

$ \Delta y $	ATLAS Gap Fraction	Herwig 7.2.0 Gap Fraction	Pythia 8.170 Gap Fraction	Herwig 7.2.0 Ratio to ATLAS	Pythia 8.170 Ratio to ATLAS
0.3	1.00	1.00	0.98	1.00	1.00
0.8	0.97	0.97	0.96	1.00	1.00
1.3	0.93	0.93	0.93	1.00	1.00
1.8	0.91	0.91	0.91	1.00	1.00
2.3	0.89	0.85	0.85	0.98	1.00
2.8	0.87	0.87	0.84	1.00	0.99
3.3	0.83	0.77	0.81	0.98	1.00
3.8	0.79	0.76	0.77	0.98	1.00
4.3	0.74	0.72	0.80	1.00	1.10
4.8	0.70	0.68	0.66	0.98	0.92
5.3	0.63	0.69	0.69	1.15	1.15
5.8	0.60	0.66	0.69	1.15	1.20