

Gap fraction

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

- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.150 default
- - ◆ Sherpa 2.2.4 default

2

1.5

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

2

1

0.5

0

2

4

6

$|\Delta y|$

The figure displays two panels sharing a common x-axis representing the rapidity difference $|\Delta y|$ from 0 to 6. The top panel shows the gap fraction, with ATLAS data points (black squares) and three Monte Carlo (MC) model predictions: Herwig 7.2.0 (green dashed line with squares), Pythia 8.150 (blue solid line with triangles), and Sherpa 2.2.4 (red dotted line with diamonds). The bottom panel shows the ratio of the gap fraction to the ATLAS data, with the same MC models overlaid. A 2D histogram in the bottom panel indicates the distribution of the ratio, with yellow and green regions showing higher ratios at larger $|\Delta y|$. The text 'ATLAS_2011_S9126244' is present in the top panel, and 'Rivet 3.1.0, $\geq 100k$ events' and 'mcplots.cern.ch [arXiv:1306.3436]' are on the right side.

$ \Delta y $	ATLAS	Herwig 7.2.0	Pythia 8.150	Sherpa 2.2.4
0.4	1.0	1.0	1.0	1.0
0.8	0.95	1.0	0.95	0.95
1.2	0.9	0.95	0.85	0.95
1.6	0.9	0.9	0.95	1.0
2.2	0.9	0.85	0.85	0.9
2.8	0.85	0.85	0.85	0.85
3.2	0.8	0.75	0.75	0.8
3.6	0.8	0.65	0.95	0.6
4.2	0.7	0.65	0.65	0.65
4.8	0.45	0.4	0.75	0.75
5.4	0.3	-	-	-
5.8	0.0	-	-	-