

Gap fraction

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

- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.210 default
- - ◆ Sherpa 2.2.8 default

2

1.8

1.6

1.4

1.2

1.0

0.8

0.6

0.4

0.2

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 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 (0.2 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). Both panels show 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 2.2.8 (red dotted line with solid diamonds). The top panel also includes a horizontal line at 1.0. The bottom panel includes a shaded region (green and yellow) around the ratio 1.0. The text 'ATLAS\_2011\_S9126244' is present in the top panel.

$ \Delta y $	ATLAS (Gap)	Herwig 7.2.0 (Gap)	Pythia 8.210 (Gap)	Sherpa 2.2.8 (Gap)	ATLAS (Ratio)	Herwig 7.2.0 (Ratio)	Pythia 8.210 (Ratio)	Sherpa 2.2.8 (Ratio)
0.4	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
0.8	0.98	0.98	0.98	0.98	1.00	1.00	1.00	1.00
1.2	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
1.6	0.92	0.92	0.92	0.92	1.00	1.00	1.00	1.00
2.2	0.90	0.85	0.90	0.90	1.00	0.95	1.00	1.00
2.8	0.88	0.88	0.88	0.90	1.00	1.00	1.00	1.00
3.4	0.85	0.80	0.80	0.85	1.00	0.95	0.95	1.00
4.0	0.80	0.78	0.78	0.80	1.00	1.00	0.95	1.00
4.4	0.75	0.75	0.65	0.85	1.00	1.00	0.85	1.20
4.8	0.72	0.70	0.75	0.75	1.00	1.00	1.00	1.10
5.2	0.65	0.70	0.65	0.70	1.00	1.00	1.00	1.10
5.6	0.60	0.68	0.75	0.60	1.00	1.00	1.25	0.95