

Gap fraction

Gap fraction vs Δy (LJ) ($240 < p_T < 270$)

- ATLAS
- - □ Herwig 7.2.0 default
- - ◆ Sherpa 1.4.3 default

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 consists of two vertically stacked panels sharing a common x-axis representing the rapidity difference $|\Delta y|$ from 0 to 6. The top panel plots the 'Gap fraction' on the y-axis, ranging from 0 to 2. It shows data points for ATLAS (black squares), Herwig 7.2.0 default (green dashed line with squares), and Sherpa 1.4.3 default (red dotted line with diamonds). The gap fraction decreases from approximately 0.95 at $|\Delta y| = 0.5$ to about 0.2 at $|\Delta y| = 4.5$. The bottom panel plots the 'Ratio to ATLAS' on the y-axis, ranging from 0.5 to 2. It shows the same data points as the top panel, but the ratio values are generally close to 1.0. A shaded region in the bottom panel represents the ratio of the two models, with a yellow-green color gradient. The text 'ATLAS_2011_S9126244' is visible in the bottom panel.

$ \Delta y $	ATLAS Gap Fraction	Herwig 7.2.0 Ratio	Sherpa 1.4.3 Ratio
0.5	0.95	0.95	0.95
1.0	0.80	0.80	0.75
1.5	0.65	0.65	0.60
2.0	0.55	0.55	0.55
2.5	0.45	0.45	0.45
3.0	0.35	0.35	0.30
3.5	0.30	0.30	0.30
4.0	0.30	0.25	0.25
4.5	0.35	0.15	0.25
5.5	0.00	-	-