

Gap fraction

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

- ATLAS
- Herwig++ 2.6.0 default
- Herwig 7.2.0 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

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 data points from ATLAS (black squares) and two Herwig models (orange circles and green squares). The bottom panel shows the ratio of the gap fraction to the ATLAS data, with a histogram indicating the distribution of these ratios. The histogram is colored in shades of green and yellow, showing a peak around  $|\Delta y| = 4.5$ .

$ \Delta y $	ATLAS Gap Fraction	Herwig++ 2.6.0 Gap Fraction	Herwig 7.2.0 Gap Fraction	Ratio to ATLAS
0.5	1.0	1.0	1.0	1.0
1.0	1.0	1.0	1.0	1.0
1.5	0.95	0.95	0.95	1.0
2.0	0.9	0.9	0.85	1.0
2.5	0.85	0.85	0.85	1.0
3.0	0.8	0.75	0.75	1.0
3.5	0.75	0.75	0.65	1.0
4.0	0.7	0.65	0.65	1.0
4.5	0.45	0.4	0.4	0.8
5.0	0.3	-	-	1.4
5.5	0.0	-	-	1.6