

7000 GeV pp

Jets

Gap fraction

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

- ATLAS
- Herwig++ 2.7.0 default
- Herwig 7.2.0 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 displays two panels related to the gap fraction in 7000 GeV pp collisions. The top panel shows the gap fraction (y-axis, 0 to 2) versus the absolute rapidity difference $|\Delta y|$ (x-axis, 0 to 6). The bottom panel shows the ratio of the gap fraction to the ATLAS measurement (y-axis, 0.5 to 2) versus $|\Delta y|$ (x-axis, 0 to 6). The top panel includes data points for ATLAS (black squares), Herwig++ 2.7.0 default (orange dashed line with circles), and Herwig 7.2.0 default (green dashed line with squares). The bottom panel includes a horizontal line at 1.0 and shaded regions (yellow and green) representing uncertainty or comparison ranges.

$ \Delta y $	ATLAS Gap Fraction	Herwig++ 2.7.0 Ratio	Herwig 7.2.0 Ratio
0.2	0.95	0.95	0.95
0.6	0.80	0.85	0.80
1.2	0.65	0.65	0.65
1.8	0.55	0.55	0.55
2.4	0.45	0.45	0.45
3.0	0.38	0.38	0.38
3.6	0.32	0.20	0.30
4.2	0.35	0.35	0.18
4.8	0.38	-	-
5.8	0.00	-	-