

Gap fraction

Gap fraction vs  $\Delta y$  (LJ) ( $240 < p_T < 270$ )

- ATLAS
- - □ Herwig 7.2.0 default
- · · ◆ Sherpa 1.3.0 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 comparing ATLAS experimental data with Monte Carlo models for gap fractions in 7000 GeV pp collisions. The top panel shows the gap fraction as a function of the longitudinal separation  $|\Delta y|$  between the leading and next-to-leading jets. The bottom panel shows the ratio of the gap fraction to the ATLAS data, with shaded regions indicating uncertainty bands for the Herwig and Sherpa models.

$ \Delta y $ bin	ATLAS (Gap Fraction)	Herwig 7.2.0 (Gap Fraction)	Sherpa 1.3.0 (Gap Fraction)
0.25 - 0.5	~0.95	~0.95	~0.95
0.5 - 0.75	~0.80	~0.80	~0.80
0.75 - 1.0	~0.65	~0.65	~0.65
1.0 - 1.25	~0.55	~0.55	~0.50
1.25 - 1.5	~0.45	~0.45	~0.40
1.5 - 1.75	~0.38	~0.38	~0.35
1.75 - 2.0	~0.35	~0.35	~0.30
2.0 - 2.25	~0.32	~0.32	~0.25
2.25 - 2.5	~0.30	~0.30	~0.25
2.5 - 2.75	~0.32	~0.32	~0.25
2.75 - 3.0	~0.30	~0.30	~0.25
3.0 - 3.25	~0.32	~0.32	~0.25
3.25 - 3.5	~0.30	~0.30	~0.25
3.5 - 3.75	~0.32	~0.32	~0.25
3.75 - 4.0	~0.30	~0.30	~0.25
4.0 - 4.25	~0.32	~0.32	~0.25
4.25 - 4.5	~0.30	~0.30	~0.25
4.5 - 4.75	~0.32	~0.32	~0.25
4.75 - 5.0	~0.30	~0.30	~0.25
5.0 - 5.25	~0.32	~0.32	~0.25
5.25 - 5.5	~0.30	~0.30	~0.25
5.5 - 5.75	~0.32	~0.32	~0.25
5.75 - 6.0	~0.30	~0.30	~0.25