

Gap fraction

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

- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.180 default
- - ◆ Sherpa 1.3.0 default

2.5

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 three Monte Carlo models: Herwig 7.2.0, Pythia 8.180, and Sherpa 1.3.0. The top panel shows the gap fraction as a function of the rapidity difference  $|\Delta y|$ . The bottom panel shows the ratio of the gap fraction to the ATLAS data, along with a 2D histogram representing the distribution of this ratio.

$ \Delta y $	ATLAS (Gap fraction)	Herwig 7.2.0 (Gap fraction)	Pythia 8.180 (Gap fraction)	Sherpa 1.3.0 (Gap fraction)
0.5	1.0	1.0	1.0	1.0
1.0	0.95	1.0	1.0	0.95
1.5	0.95	0.95	0.95	0.95
2.0	0.95	0.95	0.95	0.95
2.5	0.9	0.85	0.85	1.0
3.0	0.85	0.85	0.85	0.85
3.5	0.8	0.75	0.95	0.9
4.0	0.7	0.65	0.65	0.85
4.5	0.45	0.4	0.6	0.8
5.0	0.3	0.4	0.4	1.0
5.5	0.0	-	-	-