

Gap fraction

Gap fraction vs  $\Delta y$  (FB) ( $240 < p_T < 270$  ( $Q_0 = \bar{p}_T$ ))

- ATLAS
- Herwig 7.2.0 default
- ▲ Pythia 8.205 default
- ◆ Sherpa 1.3.0 default

2.5

2

1.5

1

0.5

0

2

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

0

2

4

6

$|\Delta y|$

The figure displays the gap fraction and its ratio to ATLAS as a function of the rapidity difference  $|\Delta y|$  for 7000 GeV pp collisions. The top panel shows the gap fraction, and the bottom panel shows the ratio to ATLAS. Data points are shown for ATLAS (black squares), Herwig 7.2.0 (green dashed line with squares), Pythia 8.205 (blue solid line with triangles), and Sherpa 1.3.0 (red dotted line with diamonds). The x-axis ranges from 0 to 6. The y-axis for the top panel ranges from 0 to 2.5, and for the bottom panel from 0 to 2. The bottom panel also features a shaded histogram representing the distribution of the ratio to ATLAS, with yellow and green regions.

$ \Delta y $	ATLAS (Gap Fraction)	Herwig 7.2.0 (Gap Fraction)	Pythia 8.205 (Gap Fraction)	Sherpa 1.3.0 (Gap Fraction)	Ratio to ATLAS (ATLAS)	Ratio to ATLAS (Herwig)	Ratio to ATLAS (Pythia)	Ratio to ATLAS (Sherpa)
0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.8	0.95	0.95	0.95	0.95	1.0	1.0	1.0	1.0
1.2	0.95	0.95	0.95	0.95	1.0	1.0	1.0	1.0
1.6	0.9	0.9	0.95	0.9	1.0	1.0	1.0	1.0
2.0	0.9	0.9	0.95	0.9	1.0	1.0	1.0	1.0
2.4	0.85	0.85	0.85	0.85	1.0	1.0	1.0	1.0
2.8	0.85	0.85	0.8	0.85	1.0	1.0	0.95	1.0
3.2	0.85	0.85	0.8	0.85	1.0	1.0	0.95	1.0
3.6	0.75	0.85	0.65	0.75	1.0	1.1	0.85	0.95
4.0	0.7	0.7	0.7	0.7	1.0	1.0	1.0	1.0
4.4	0.6	0.5	0.6	0.6	1.0	0.8	1.0	1.0
4.8	0.55	0.45	0.55	0.55	1.0	0.8	1.0	1.0
5.2	0.4	0.4	0.4	0.4	1.0	0.8	1.0	1.0
5.6	0.2	0.2	0.2	0.2	1.0	0.8	1.0	1.0