

Gap fraction

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

- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.170 default
- - ◆ Sherpa 2.2.4 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 sharing a common x-axis representing the absolute rapidity difference $|\Delta y|$ from 0 to 6. The top panel shows the 'Gap fraction' on the y-axis, ranging from 0 to 2. The bottom panel shows the 'Ratio to ATLAS' on the y-axis, also ranging from 0.5 to 2. The legend identifies four data series: ATLAS (black squares), Herwig 7.2.0 default (green squares), Pythia 8.170 default (blue triangles), and Sherpa 2.2.4 default (red diamonds). Error bars are shown for all data points. A horizontal line is drawn at a ratio of 1.0 in the bottom panel. A shaded region in the bottom panel indicates the uncertainty of the ATLAS data.

| $ \Delta y $ | ATLAS Gap Fraction | Herwig 7.2.0 Gap Fraction | Pythia 8.170 Gap Fraction | Sherpa 2.2.4 Gap Fraction | ATLAS Ratio to ATLAS |
|--------------|--------------------|---------------------------|---------------------------|---------------------------|----------------------|
| 0.4 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 0.8 | 0.95 | 1.0 | 0.95 | 0.95 | 1.0 |
| 1.2 | 0.95 | 0.9 | 0.95 | 0.95 | 1.0 |
| 1.6 | 0.9 | 0.9 | 0.9 | 1.0 | 1.0 |
| 2.2 | 0.9 | 0.85 | 0.9 | 0.9 | 1.0 |
| 2.8 | 0.85 | 0.85 | 0.85 | 0.85 | 1.0 |
| 3.2 | 0.8 | 0.75 | 0.75 | 0.8 | 0.9 |
| 3.6 | 0.6 | 0.6 | 0.8 | 0.6 | 0.8 |
| 4.2 | 0.7 | 0.65 | 0.8 | 0.65 | 0.95 |
| 4.8 | 0.45 | 0.4 | 0.35 | 0.75 | 0.75 |
| 5.4 | 0.3 | - | - | - | - |
| 5.8 | 0.0 | - | - | - | - |