

Gap fraction

Gap fraction vs Δy (FB) ($90 < p_T < 120$ ($Q_0 = \overline{p_T}$))

- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.130.p1 default
- - ◆ Sherpa 1.3.1 default

2.5

2

1.5

1

0.5

0

2

1

0.5

ATLAS_2011_S9126244

Rivet 3.1.0, $\geq 100k$ events

mcplots.cern.ch [arXiv:1306.3436]

Ratio to ATLAS

2

1

0.5

0

2

4

6

$|\Delta y|$

The figure consists of two vertically stacked panels sharing a common x-axis representing the rapidity difference $|\Delta y|$ from 0 to 6. The top panel shows the 'Gap fraction' on the left y-axis (0 to 2.5) and the number of events on the right y-axis (0 to 100k). The bottom panel shows the 'Ratio to ATLAS' on the left y-axis (0.5 to 2) and the number of events on the right y-axis (0.5 to 2). Both panels feature four data series: ATLAS (black squares), Herwig 7.2.0 (green dashed line with squares), Pythia 8.130.p1 (blue solid line with triangles), and Sherpa 1.3.1 (red dotted line with diamonds). Error bars are shown for all data points. The ATLAS data points are generally consistent with the MC models, which show some variation at larger $|\Delta y|$. The bottom panel includes shaded regions: a yellow region around a ratio of 1.0 and a green region around a ratio of 1.0, indicating the range of MC predictions relative to ATLAS.