

Gap fraction

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

- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.205 default
- - ◆ Sherpa 1.4.2 default

2

1.5

1

0.5

0

ATLAS_2011_S9126244

Rivet 3.1.0, ≥ 100 k events

mcplots.cern.ch [arXiv:1306.3436]

Ratio to ATLAS

2

1

0.5

2

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 y-axis (0 to 2), with ATLAS data points (black squares) and three Monte Carlo (MC) model predictions: Herwig 7.2.0 (green dashed line with open squares), Pythia 8.205 (blue solid line with solid triangles), and Sherpa 1.4.2 (red dotted line with solid diamonds). The bottom panel shows the 'Ratio to ATLAS' on the y-axis (0.5 to 2), with the same MC model predictions. A horizontal line is drawn at a ratio of 1.0. The bottom panel also features a 2D histogram in the background, colored in shades of green and yellow, representing the distribution of the ratio to ATLAS across different $|\Delta y|$ bins. The histogram shows a concentration of points around a ratio of 1.0, with some spread at higher $|\Delta y|$ values.