

Gap fraction

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

- ATLAS
- Herwig 7.2.0 default
- ▲ Pythia 8.108.p1 default
- ◆ Sherpa 1.4.0 default

2

1.5

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

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 absolute rapidity difference  $|\Delta y|$  from 0 to 6. The top panel displays the gap fraction, with the y-axis ranging from 0 to 2. It includes experimental data from ATLAS (black squares) and three Monte Carlo models: Herwig 7.2.0 (green dashed line with squares), Pythia 8.108.p1 (blue solid line with triangles), and Sherpa 1.4.0 (red dotted line with diamonds). All data points include vertical error bars. The bottom panel shows the ratio of the gap fraction to the ATLAS data, with the y-axis ranging from 0.5 to 2. It features the same data points and MC models as the top panel, along with a 2D histogram in the background. The histogram is color-coded, with yellow representing the ratio range of 0.5 to 1.5 and green representing the ratio range of 0.75 to 1.75. A horizontal line is drawn at a ratio of 1.0. The text 'ATLAS\_2011\_S9126244' is centered in the top panel, and 'Rivet 3.1.0,  $\geq 100k$  events' and 'mcplots.cern.ch [arXiv:1306.3436]' are on the right side.