

Gap fraction

Gap fraction vs  $\Delta y$  (LJ) ( $180 < p_T < 210$ )

- ATLAS
- - □ Herwig 7.1.0 default
- - ◆ Sherpa 2.2.8 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 comparing ATLAS experimental data with Herwig 7.1.0 and Sherpa 2.2.8 Monte Carlo models for gap fractions in 7000 GeV pp collisions. The top panel shows the gap fraction (y-axis, 0 to 2) versus the absolute rapidity difference  $|\Delta y|$  (x-axis, 0 to 6). The bottom panel shows the ratio of the gap fraction to the ATLAS data (y-axis, 0.5 to 2) versus  $|\Delta y|$  (x-axis, 0 to 6). The ATLAS data points are black squares with error bars. The Herwig 7.1.0 default model is shown as a green dashed line with open squares, and the Sherpa 2.2.8 default model is shown as a red dotted line with open diamonds. The bottom panel also features shaded regions: yellow for the Herwig model and green for the Sherpa model, indicating the uncertainty bands. A horizontal line at a ratio of 1.0 is shown for reference. The plot is titled 'Gap fraction vs  $\Delta y$  (LJ) ( $180 < p_T < 210$ )' and includes the ATLAS ID 'ATLAS\_2011\_S9126244'.