

Gap fraction

Gap fraction vs Δy (LJ) ($240 < p_T < 270$)

- ATLAS
- Herwig 7.2.0 default
- ◆ Sherpa 1.2.2p 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 consists of two vertically stacked panels sharing a common x-axis representing the rapidity difference $|\Delta y|$ from 0 to 6. The top panel plots the 'Gap fraction' on the y-axis (0 to 2). It shows data points for ATLAS (black squares) and two Monte Carlo models: Herwig 7.2.0 default (green dashed line with open squares) and Sherpa 1.2.2p default (red dotted line with filled diamonds). All series show a decreasing trend as $|\Delta y|$ increases. The bottom panel plots the 'Ratio to ATLAS' on the y-axis (0.5 to 2). It shows the same three data series. The Herwig and Sherpa models are mostly within a shaded region (yellow and green) centered around a ratio of 1.0. The ATLAS data points (black squares) are mostly within the shaded region but show a significant drop to 0 at $|\Delta y| \approx 5.5$. A horizontal line is drawn at a ratio of 1.0. The text 'ATLAS_2011_S9126244' is present in the top panel, and 'Rivet 3.1.0, $\geq 100k$ events' and 'mcplots.cern.ch [arXiv:1306.3436]' are on the right side.