

Gap fraction

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

- ATLAS
- Herwig++ 2.5.2 default
- Herwig 7.2.0 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 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 ATLAS experimental data (black squares) and two Monte Carlo model predictions: Herwig++ 2.5.2 default (orange dashed line with open circles) and Herwig 7.2.0 default (green dashed line with open squares). Both models show a general decrease in gap fraction as $|\Delta y|$ increases, with some fluctuations. The bottom panel shows the ratio of the model predictions to the ATLAS data, with the y-axis ranging from 0.5 to 2. A horizontal line is drawn at a ratio of 1.0. A shaded region, colored in light green and yellow, represents the distribution or uncertainty of the ratio, showing that the models generally predict a gap fraction similar to or slightly higher than the ATLAS data, especially at larger $|\Delta y|$.