

Gap fraction

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

- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.150 default
- - ◆ Sherpa 2.2.4 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 displays two panels. The top panel shows the gap fraction as a function of the rapidity difference $|\Delta y|$ for 7000 GeV pp collisions. The y-axis ranges from 0 to 2.0, and the x-axis ranges from 0 to 6. Data points are shown for ATLAS (black squares) and three Monte Carlo models: Herwig 7.2.0 (green squares), Pythia 8.150 (blue triangles), and Sherpa 2.2.4 (red diamonds). The bottom panel shows the ratio of the gap fraction to the ATLAS data as a function of $|\Delta y|$. The y-axis ranges from 0.5 to 2.0, and the x-axis ranges from 0 to 6. The data points are the same as in the top panel, but the y-axis is the ratio to ATLAS. A horizontal line is drawn at a ratio of 1.0. A 2D histogram is overlaid on the bottom panel, showing the distribution of the ratio to ATLAS. The histogram is colored in shades of green and yellow, indicating the density of events in different bins of the ratio and $|\Delta y|$.