

Gap fraction

Gap fraction vs Δy (LJ) ($90 < p_T < 120$)

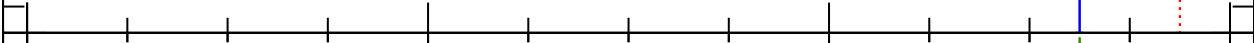
- ATLAS
- - □ Herwig 7.2.0 default
- - ▲ Pythia 8.212 default
- - ◆ Sherpa 1.4.1 default

2
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
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 bottom plot shows the ratio of the gap fraction to the ATLAS data as a function of Δy . The y-axis ranges from 0.5 to 2.0. The same four data series are plotted. A horizontal line is drawn at a ratio of 1.0. The Herwig 7.2.0 model (green squares) shows a significant deviation, with a ratio of approximately 1.5 at $\Delta y \approx 4.8$. The Pythia 8.212 model (blue triangles) shows a sharp dip to a ratio of about 0.4 at $\Delta y \approx 5.2$. The ATLAS data (black squares) and Sherpa 1.4.1 model (red diamonds) remain very close to the ratio of 1.0 across the entire range of Δy .