

Gap fraction

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

- ATLAS
- - □ Herwig 7.2.0 default
- ⋯ ◆ Sherpa 2.2.1 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 related to the gap fraction in 7000 GeV pp collisions. The top panel shows the gap fraction as a function of the absolute rapidity difference $|\Delta y|$ (ranging from 0 to 6). The data points are from ATLAS (black squares), Herwig 7.2.0 default (green dashed line with squares), and Sherpa 2.2.1 default (red dotted line with diamonds). The gap fraction decreases from approximately 0.9 at $|\Delta y| = 0.5$ to about 0.2 at $|\Delta y| = 4.5$. The bottom panel shows the ratio of the gap fraction to the ATLAS data. The Herwig 7.2.0 default model (green shaded region) and Sherpa 2.2.1 default model (yellow shaded region) are compared to the ATLAS data. The ratio is generally close to 1.0, indicating good agreement with the ATLAS data, but shows some deviation at larger $|\Delta y|$.