

7000 GeV pp

Jets

Gap fraction

Gap fraction vs Δy (FB) ($150 < p_T < 180$ ($Q_0 = \bar{p}_T$))

- ATLAS
- - □ Herwig 7.1.0 default
- - ▲ Pythia 8.301 default
- - ◆ Sherpa 2.1.1 default

2.5

2

1.5

1

0.5

0

2

1

0.5

Rivet 3.1.0, $\geq 100k$ events

mcplots.cern.ch [arXiv:1306.3436]

ATLAS_2011_S9126244

Ratio to ATLAS

2

1

0.5

0

2

4

6

$|\Delta y|$

The figure displays two panels comparing ATLAS experimental data with Monte Carlo (MC) models for gap fractions in 7000 GeV pp collisions. The top panel shows the gap fraction as a function of the rapidity separation $|\Delta y|$ (ranging from 0 to 6). The bottom panel shows the ratio of the gap fraction to the ATLAS data, also as a function of $|\Delta y|$. The ATLAS data points are represented by black squares with error bars. The MC models are represented by different symbols and line styles: Herwig 7.1.0 default (green dashed line with squares), Pythia 8.301 default (blue solid line with triangles), and Sherpa 2.1.1 default (red dotted line with diamonds). The bottom panel also features a shaded region representing the uncertainty or spread of the MC models, with yellow and green colors. A horizontal line is drawn at a ratio of 1.0, indicating where the MC models perfectly match the ATLAS data. The plot includes the text 'ATLAS_2011_S9126244' and 'Rivet 3.1.0, $\geq 100k$ events'.