

Gap fraction

Gap fraction vs Δy (LJ) ($70 < p_T < 90$)

- ATLAS
- ▲ Pythia 8.308 default
- ▲ Pythia 8.308 default-noFsr
- ▲ Pythia 8.308 default-noRap

2

1.8

1.6

1.4

1.2

1.0

0.8

0.6

0.4

0.2

0

ATLAS_2011_S9126244

Rivet 3.1.10, $\geq 100k$ 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 rapidity difference $|\Delta y|$ from 0 to 6. The top panel plots the 'Gap fraction' on the left y-axis (0 to 2) against $|\Delta y|$. It shows four data series: ATLAS (black squares), Pythia 8.308 default (dark blue triangles), Pythia 8.308 default-noFsr (purple triangles), and Pythia 8.308 default-noRap (light blue triangles). All series show a general downward trend from a gap fraction of approximately 1.0 at $|\Delta y| \approx 0.5$ to about 0.35 at $|\Delta y| \approx 5.5$. The bottom panel plots the 'Ratio to ATLAS' on the left y-axis (0.5 to 2) against $|\Delta y|$. It uses the same four data series, showing ratios that fluctuate around 1.0. Shaded regions in yellow and green represent uncertainty bands for the simulation models. A horizontal line is drawn at a ratio of 1.0. The text 'ATLAS_2011_S9126244' is present in the top panel, and 'Rivet 3.1.10, $\geq 100k$ events' and 'mcplots.cern.ch [arXiv:1306.3436]' are on the right side.