

Gap fraction

Gap fraction vs  $\Delta y$  (FB) ( $240 < p_T < 270$ )

- ATLAS
- Pythia 6.424 p0
- Pythia 6.424 p2010

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

0.5

0 2 4 6

$|\Delta y|$

0

2

4

6

$|\Delta y|$

The figure consists of two vertically stacked panels sharing a common x-axis representing the absolute rapidity difference  $|\Delta y|$  from 0 to 6. The top panel shows the gap fraction, with data points from ATLAS (black squares) and two Pythia 6.424 models (open circles for p0, open squares for p2010). The bottom panel shows the ratio of the gap fraction to the ATLAS data, with the same data points and a shaded background (yellow and green) representing uncertainty bands. A horizontal line is drawn at a ratio of 1.0. The ATLAS data point at  $|\Delta y| \approx 5.7$  is significantly lower than the others.

$ \Delta y $	ATLAS Gap Fraction	Pythia 6.424 p0 Gap Fraction	Pythia 6.424 p2010 Gap Fraction	Ratio to ATLAS
0.3	0.95	0.95	0.95	1.0
0.8	0.75	0.75	0.80	1.05
1.3	0.60	0.60	0.65	1.05
1.8	0.50	0.50	0.55	1.0
2.3	0.45	0.45	0.45	1.1
2.8	0.35	0.35	0.45	1.2
3.3	0.30	0.30	0.30	1.0
3.8	0.20	0.15	0.25	0.8
4.3	0.15	0.05	0.25	0.45
4.8	0.15	-	0.25	1.9
5.7	0.0	-	-	-