

Gap fraction

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

- ATLAS
- ▼ Herwig 7.2.0 softTune
- △ Pythia 6.428 370
- ▲ Pythia 8.135 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 comparing ATLAS experimental data with Monte Carlo 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, with shaded regions indicating uncertainty bands for the models.

$ \Delta y $	ATLAS (Gap Fraction)	Herwig 7.2.0 softTune (Gap Fraction)	Pythia 6.428 370 (Gap Fraction)	Pythia 8.135 default (Gap Fraction)
0.2	0.95	0.95	0.95	0.95
0.7	0.75	0.85	0.75	0.75
1.3	0.65	0.65	0.65	0.55
1.7	0.55	0.55	0.45	0.40
2.2	0.45	0.45	0.45	0.35
2.7	0.38	0.38	0.38	0.25
3.2	0.35	0.35	0.35	0.30
3.7	0.30	0.25	0.25	0.10
4.2	0.32	0.25	0.45	0.15
4.7	0.35	0.25	0.35	0.70