

7000 GeV pp

Jets

 $\overline{N}_{\text{jet}}$  $N_{\text{jet}}$  vs  $p_T$  (LJ) ( $4 < \Delta y < 5$ )

- ATLAS
- - □ Herwig 7.2.0 default
- - ◆ Sherpa 2.2.1 default

5

4

3

2

1

0

2

1

0.5

Rivet 3.1.0,  $\geq 5.4\text{M}$  events

mcplots.cern.ch [arXiv:1306.3436]

ATLAS\_2011\_S9126244

Ratio to ATLAS

2

1

0.5

$\overline{P}_T$  [GeV]

The figure displays two panels. The top panel shows the mean number of jets,  $\overline{N}_{\text{jet}}$ , as a function of the transverse momentum,  $\overline{P}_T$ , in GeV. The bottom panel shows the ratio of the mean number of jets to the ATLAS measurement,  $\overline{N}_{\text{jet}} / \overline{N}_{\text{jet}}^{\text{ATLAS}}$ , as a function of  $\overline{P}_T$ . The ATLAS data is represented by black squares. The Herwig 7.2.0 default model is shown as a green dashed line with open squares, and the Sherpa 2.2.1 default model is shown as a red dotted line with open diamonds. The bottom panel includes shaded regions in green and yellow, representing the uncertainty bands for the ratios. Two vertical red dotted lines are present at approximately  $\overline{P}_T = 140$  GeV and  $\overline{P}_T = 160$  GeV.