

13000 GeV pp

Z (Drell-Yan)

 $\langle N_{\text{ch}} \rangle$ vs p_{T}^Z (ATLAS UE in Z production) $\langle N_{\text{ch}}/d\eta d\phi \rangle$

6

5

4

3

2

1

0

2

1

0.5

0

2

1

0.5

0

2

1

0.5

0

2

1

0.5

■ ATLAS

- - □ Herwig 7.0.4 default

- - ○ MadGraph5 2.7.2.atlas3 lo

- - ▲ Pythia 8.210 default

- - ◆ Sherpa 2.2.9 default

ATLAS_2019_I1736531

Rivet 3.1.10, ≥ 600k events

mcplots.cern.ch [arXiv:1306.3436]

2

1

0.5

0

2

1

0.5

0

200

400

 $Z p_{\text{T}}$ [GeV]