

13000 GeV pp

Z (Drell-Yan)

Average $\Sigma(p_T)$ (ATLAS UE in Z production)

- ATLAS
- - □ Herwig 7.2.1 default
- - ▲ Pythia 8.308 default

 $\langle \text{sum } p_{T, \text{dn}} d\phi \rangle$ [GeV]

3

2.5

2

1.5

1

0.5

0

Rivet 3.1.10, $\geq 3.3\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

ATLAS_2019_I1736531

Ratio to ATLAS

2

1

0.5

2

1

0.5

0

200

400

 $Z p_T$ [GeV]