

13000 GeV pp

Z (Drell-Yan)

 $1/N_{\text{ch}} dN_{\text{ch}}/dp_T [\text{GeV}]$ p_T spectrum (ATLAS UE in Z production)

- ATLAS
- △ Herwig++ Powheg 2.7.1 default
- ▽ Herwig++ Powheg 2.7.1 LHC-UE-EE-4
- Herwig 7.2.1 default

Rivet 3.1.10, $\geq 2.7\text{M}$ events

mcplots.cern.ch [arXiv:1306.3436]

ATLAS_2019_I1736531

Ratio to ATLAS

0.5

2

2

0.5

0

2

4

 $p_T [\text{GeV}]$ 