

13000 GeV pp

Z (Drell-Yan)

 $p_T$  spectrum (ATLAS UE in Z production)

- ATLAS
- Herwig++ 2.7.1 default
- Herwig 7.2.1 default
- ▲- Pythia 8.212 default

Rivet 3.1.10, ≥ 400k events

mcplots.cern.ch [arXiv:1306.3436]

ATLAS\_2019\_I1736531

Ratio to ATLAS

 $N_{ch}/d\eta d\phi$ 