

13000 GeV pp

Z (Drell-Yan)

Average  $\Sigma(p_T)$  (ATLAS UE in Z production) $\langle \text{sum } p_{T, \text{dn}} d\phi \rangle$  [GeV]6  
5  
4  
3  
2  
1  
0

■ ATLAS

-○- Herwig++ 2.7.1 default

-△- Herwig++ Powheg 2.7.1 default

-▽- Herwig++ Powheg 2.7.1 LHC-UE-EE-4

-□- Herwig 7.2.1 default

Rivet 3.1.10, ≥ 3.4M events

mcplots.cern.ch [arXiv:1306.3436]

ATLAS\_2019\_I1736531

Ratio to ATLAS

2  
1  
0.52  
1  
0.5

0

200

400

 $Z p_T$  [GeV]