

13000 GeV pp

Z (Drell-Yan)

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

- ATLAS
- Herwig 7.2.1 default
- MadGraph5 2.7.2.atlas3 lo
- ▲ Pythia 8.170 default
- ◆ Sherpa 2.2.9 default

Rivet 3.1.10,  $\geq 400k$  events

mcplots.cern.ch [arXiv:1306.3436]

ATLAS\_2019\_11736531

Ratio to ATLAS

2

1

0.5

 $Z p_T$  [GeV] $\langle \sum p_{T, \text{UE}} \rangle$  [GeV]4  
3.5  
3  
2.5  
2  
1.5  
1  
0.5  
02  
1  
0.5

0

200

400