

# Repository

- <https://gitlab.cern.ch/lhcewkgw/lhcewkgw-precisionEW/mwcombinations>
- Smearing parametrizations
- Combination code
- Resbos grids...

# Recoil smearing

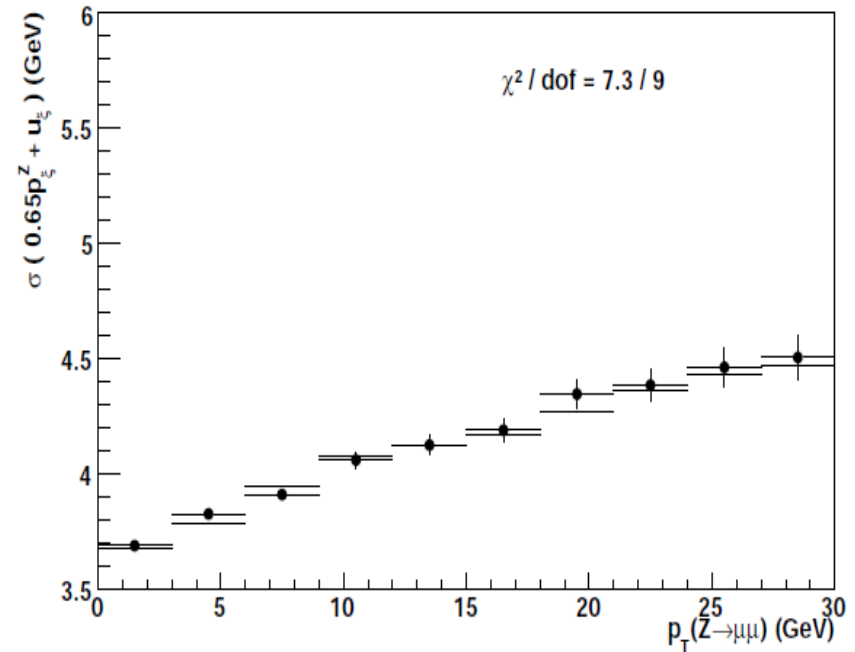
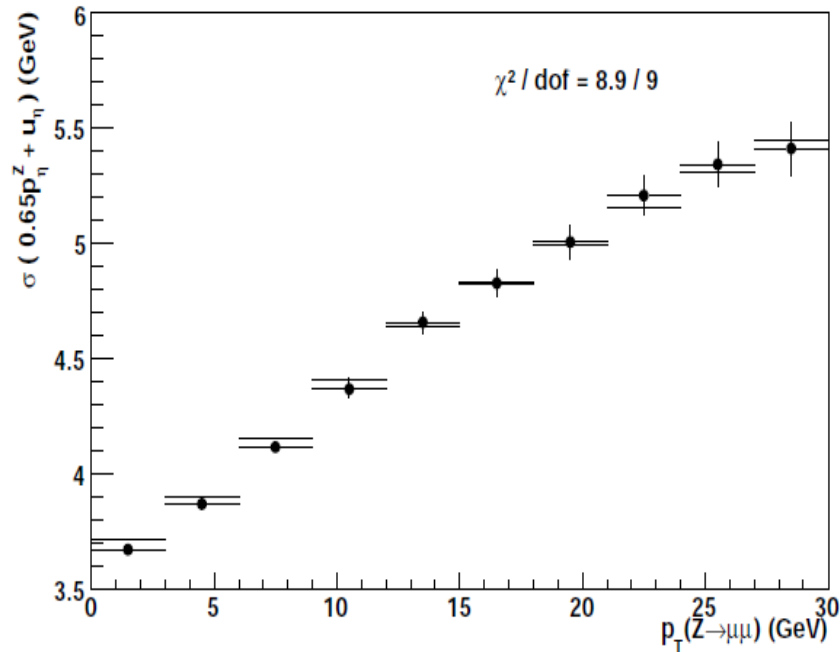
- Produced resolution parametrizations for 5, 13, 27 TeV

→ HL-LHC study :

<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/PUBNOTES/ATL-PHYS-PUB-2018-026/>

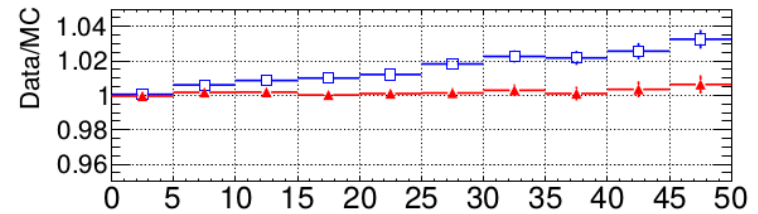
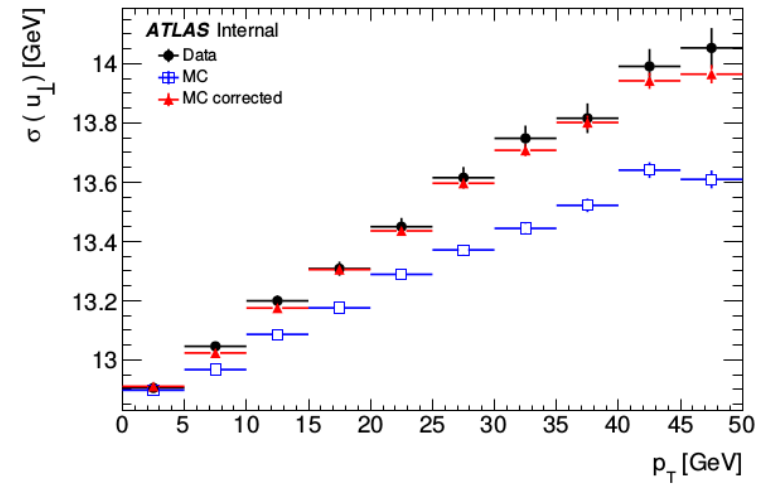
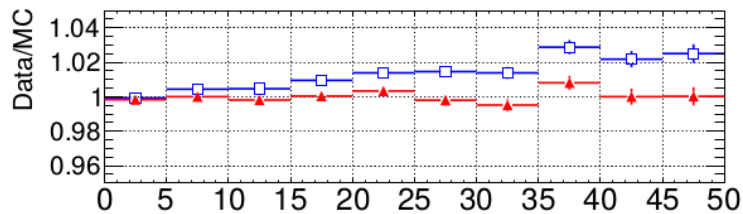
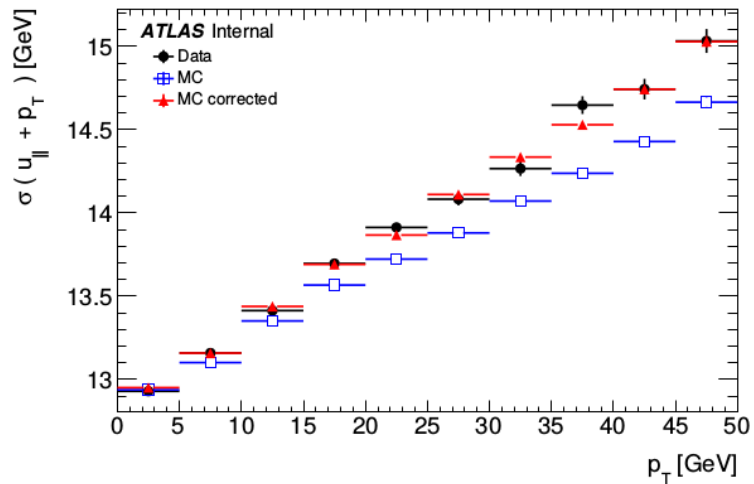
- Another application is the Tevatron/ATLAS combination

– Recoil parametrization from CDF



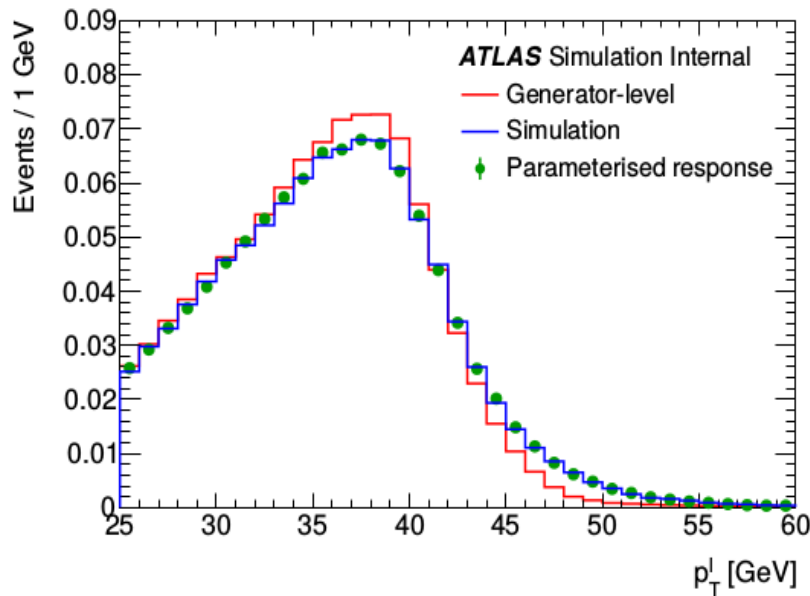
# Recoil smearing

- Nancy produced resolution parametrizations for 5, 13, 27 TeV  
→ HL-LHC study
- Another application is the Tevatron/ATLAS combination
  - Recoil parametrization from ATLAS

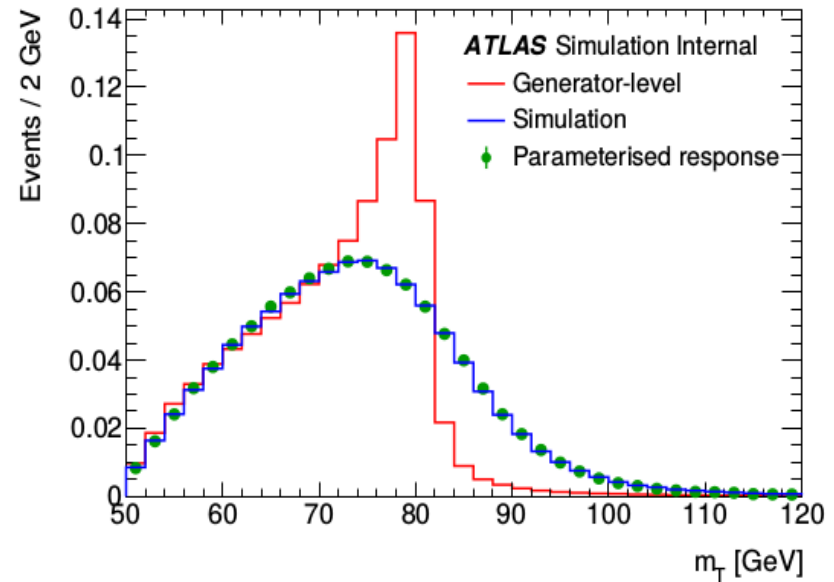


# Some validation plots

- ATLAS 5/13 TeV low pile-up (not relevant here, but for the method)



(a)

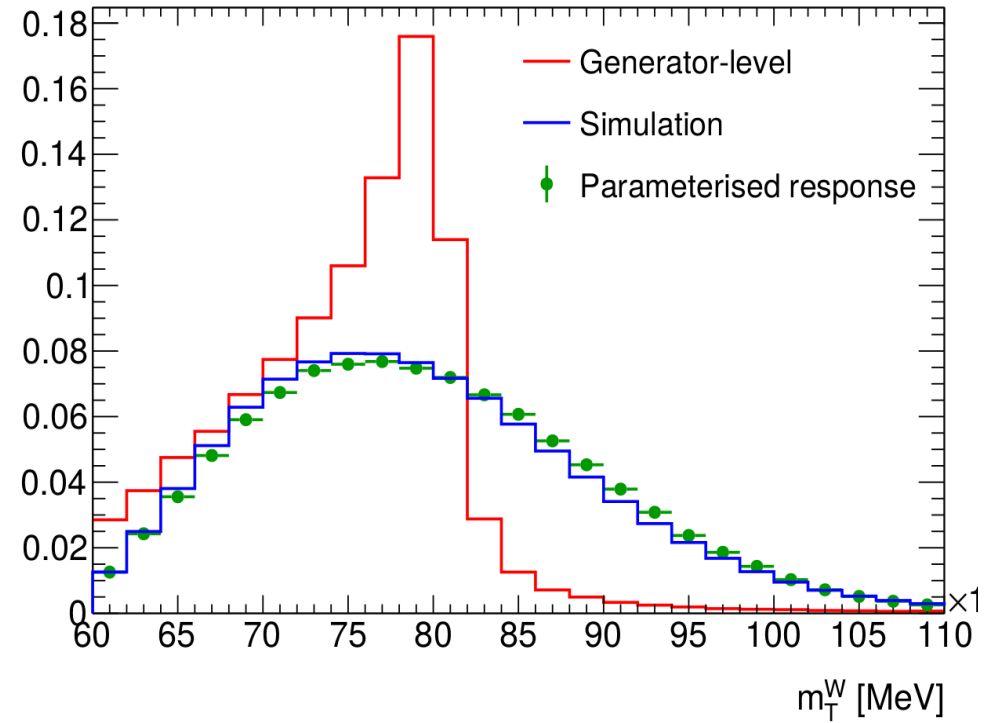
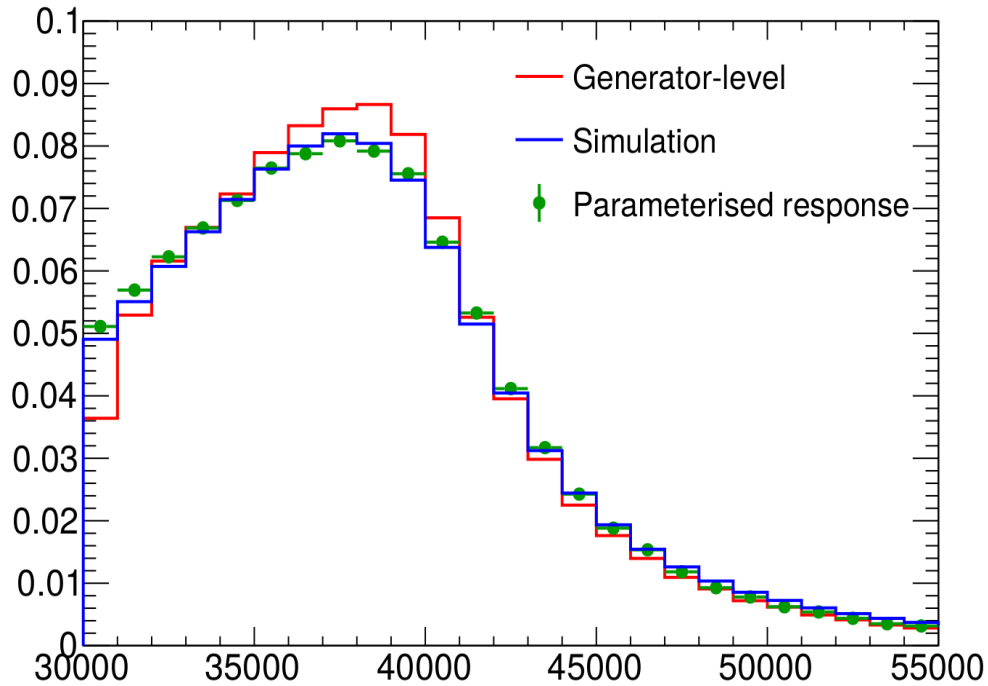


(b)

Figure 2: Generator- and detector-level  $p_T^l$  (a) and  $m_T$  (b) distributions for selected signal events. The detector-level distributions are shown as predicted by the full simulation and by the parameterised resolution corrections described in the text.

# Some validation plots

- ATLAS 7 TeV



Not as perfect.... check recoil scale; also plot  $u_T$