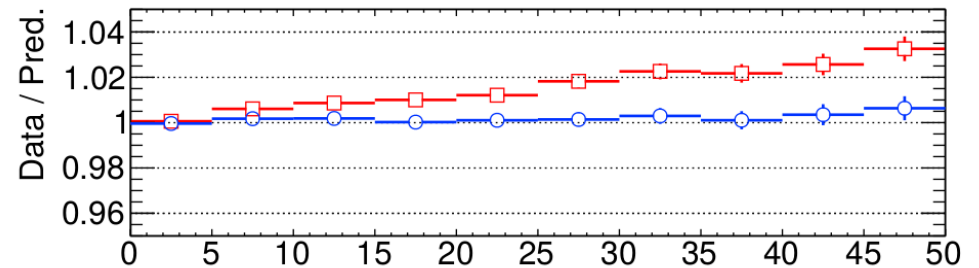
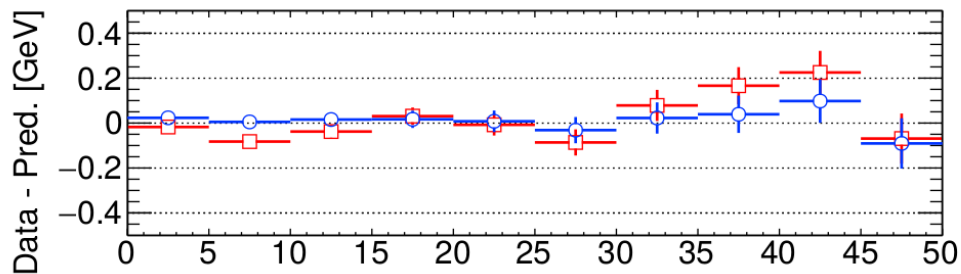
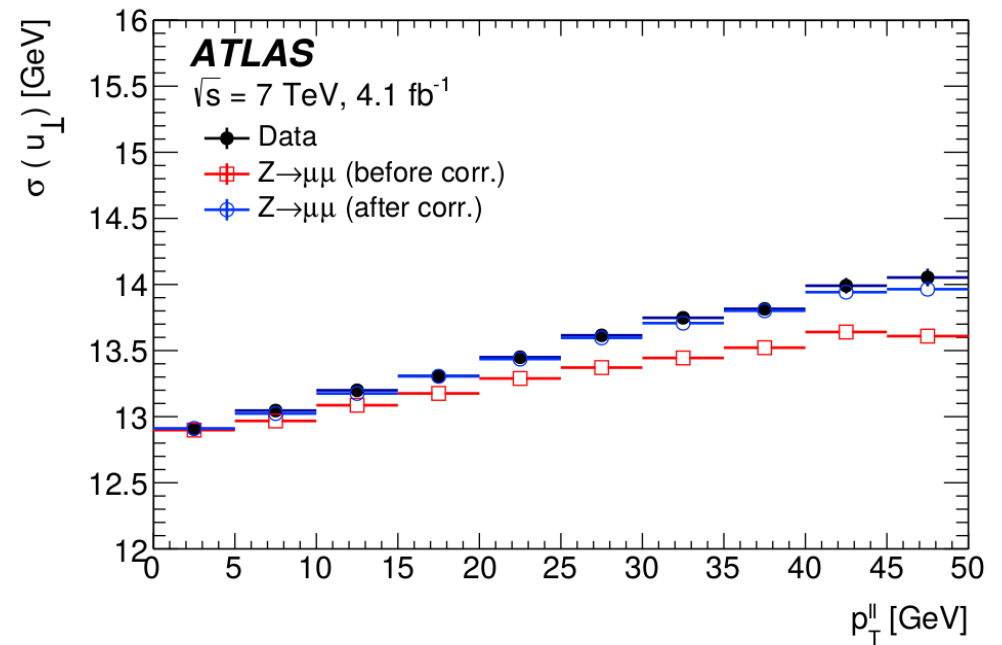
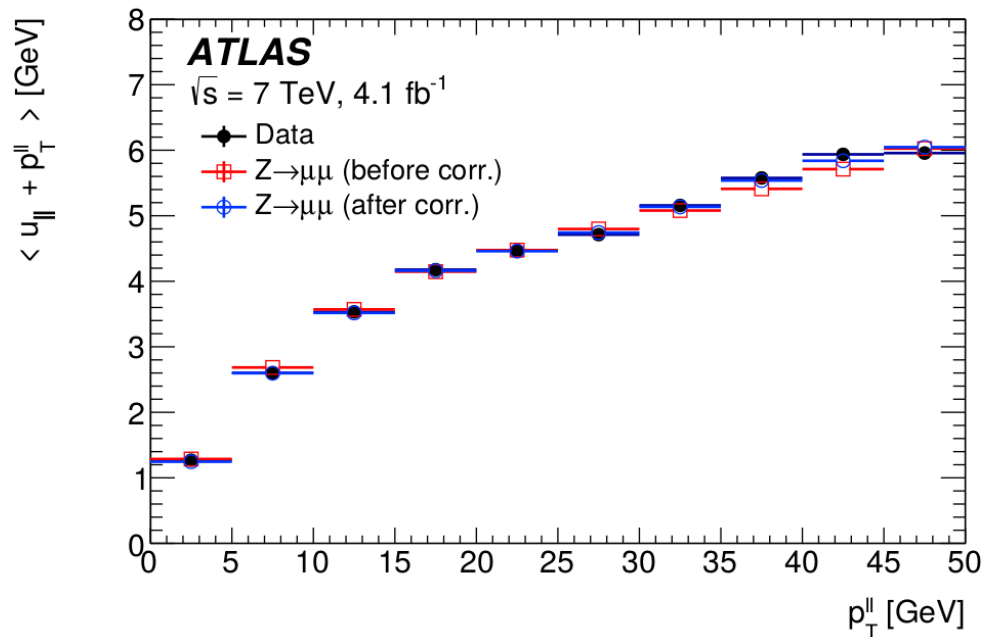


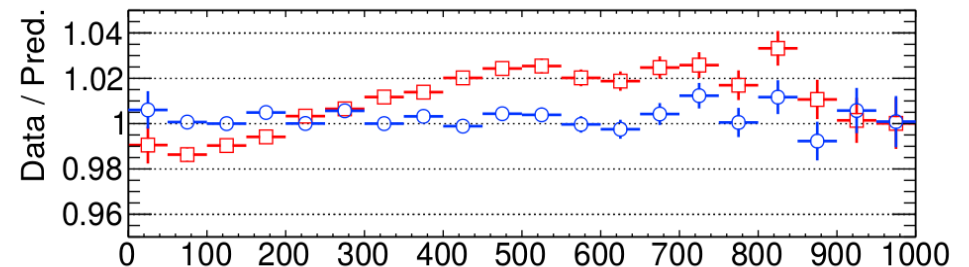
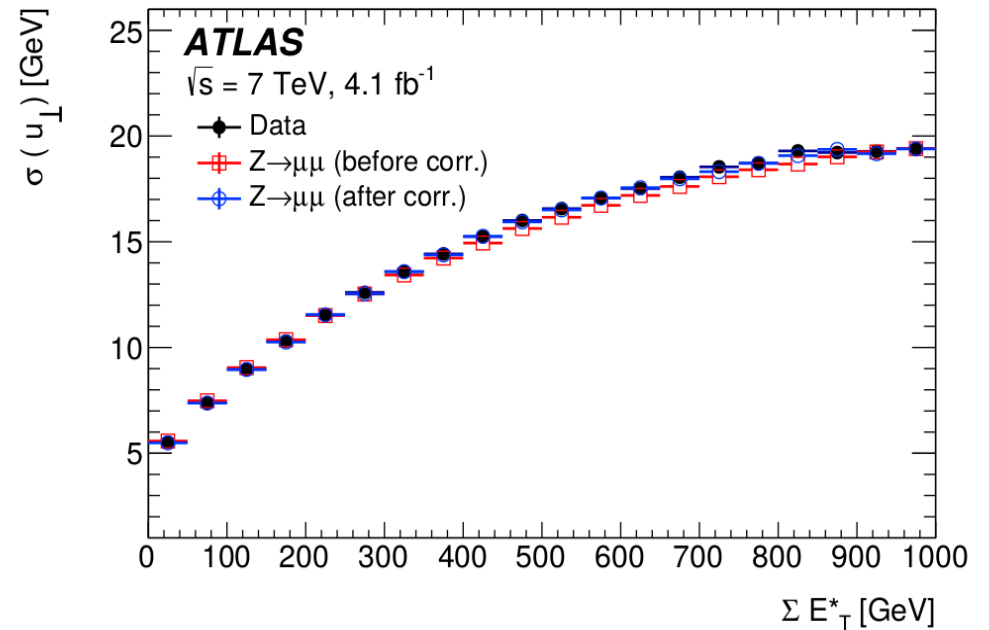
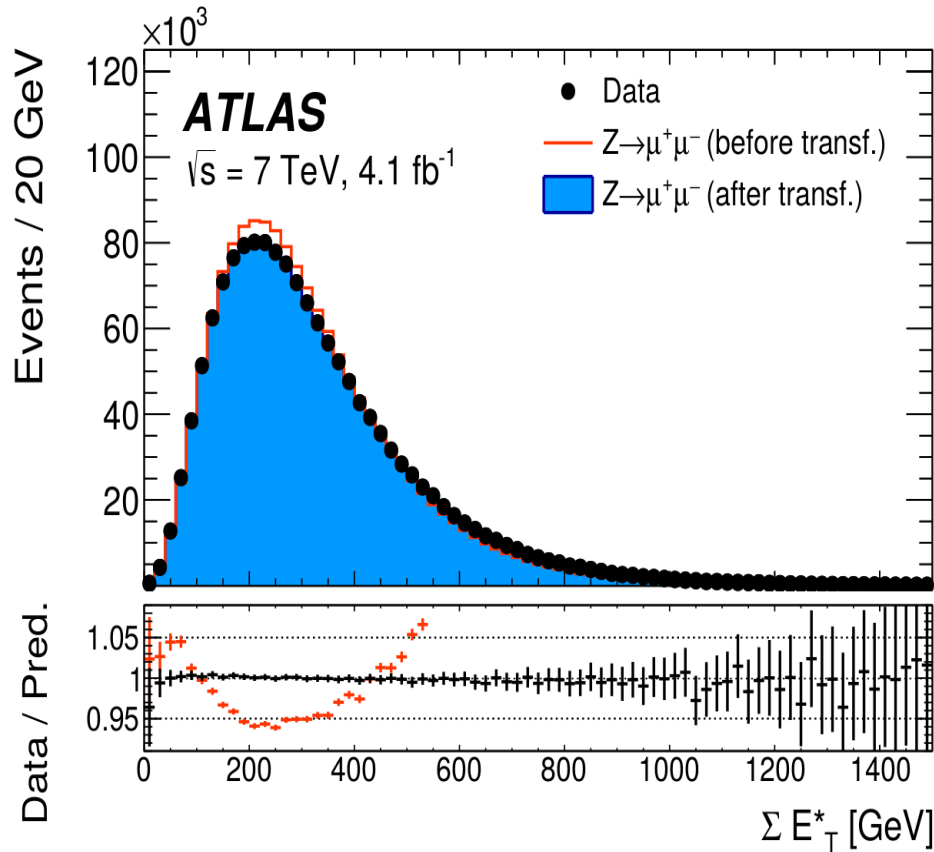
Parametrized smearing at 7 TeV

- p_T^V - dependent smearing : bias and resolution



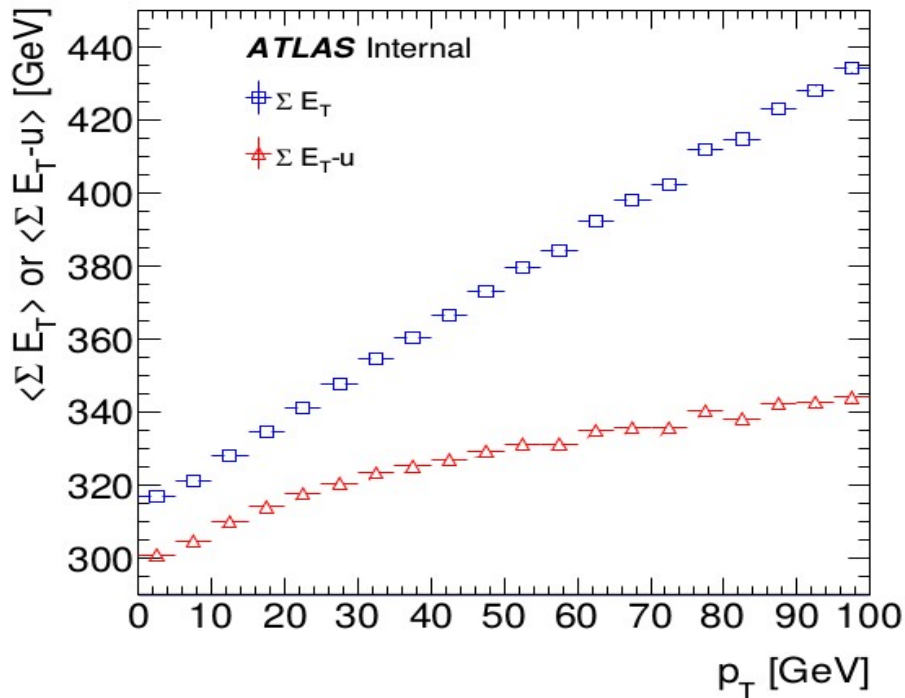
Parametrized smearing at 7 TeV

- This ignores that at given p_T , SumET fluctuates, so that the resolution is not a constant
 - Rather define “soft SumET”, $\equiv \text{SumET} - u_T$

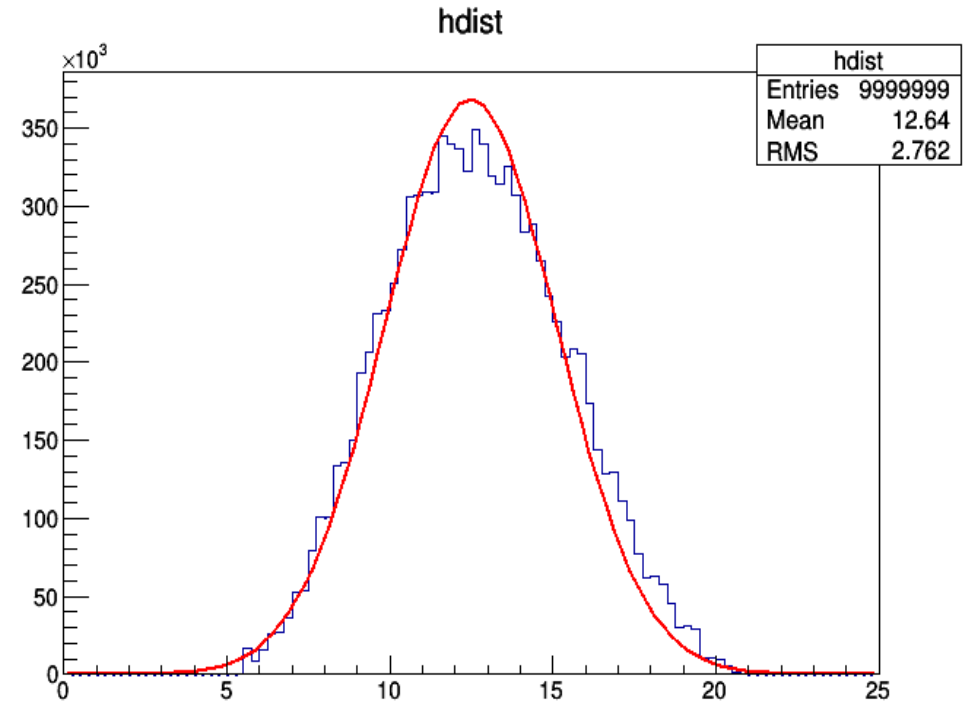


Parametrized smearing at 7 TeV

- Impact of soft SumET fluctuations at given pTV



Soft SumET and pT are ~uncorrelated

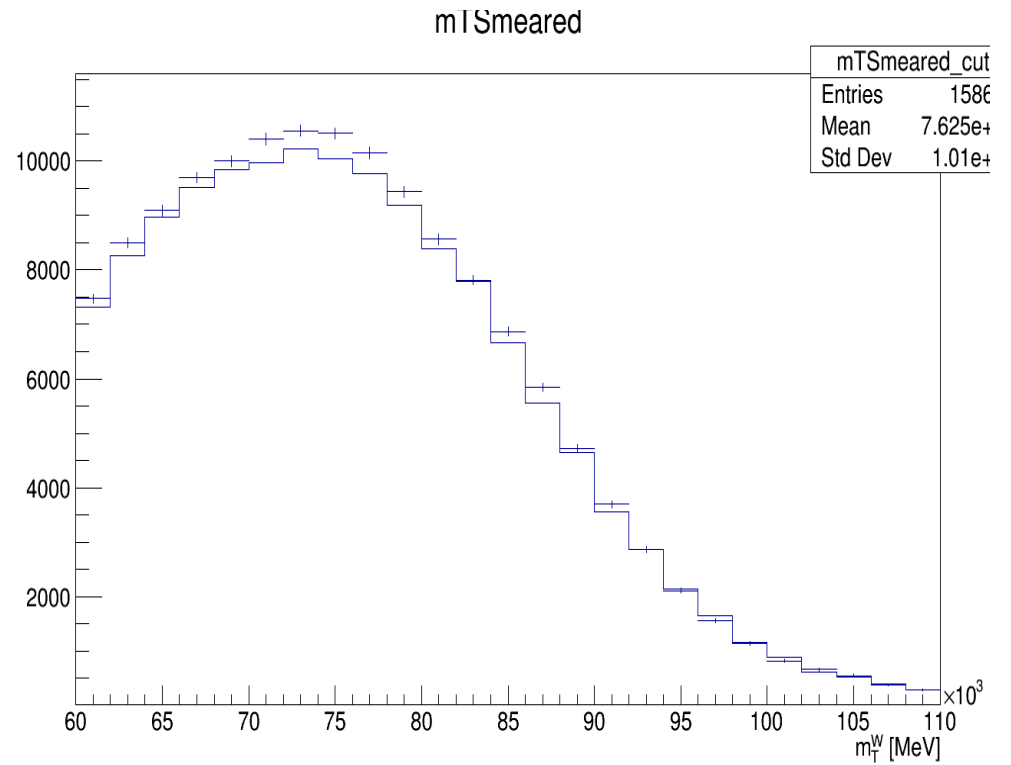
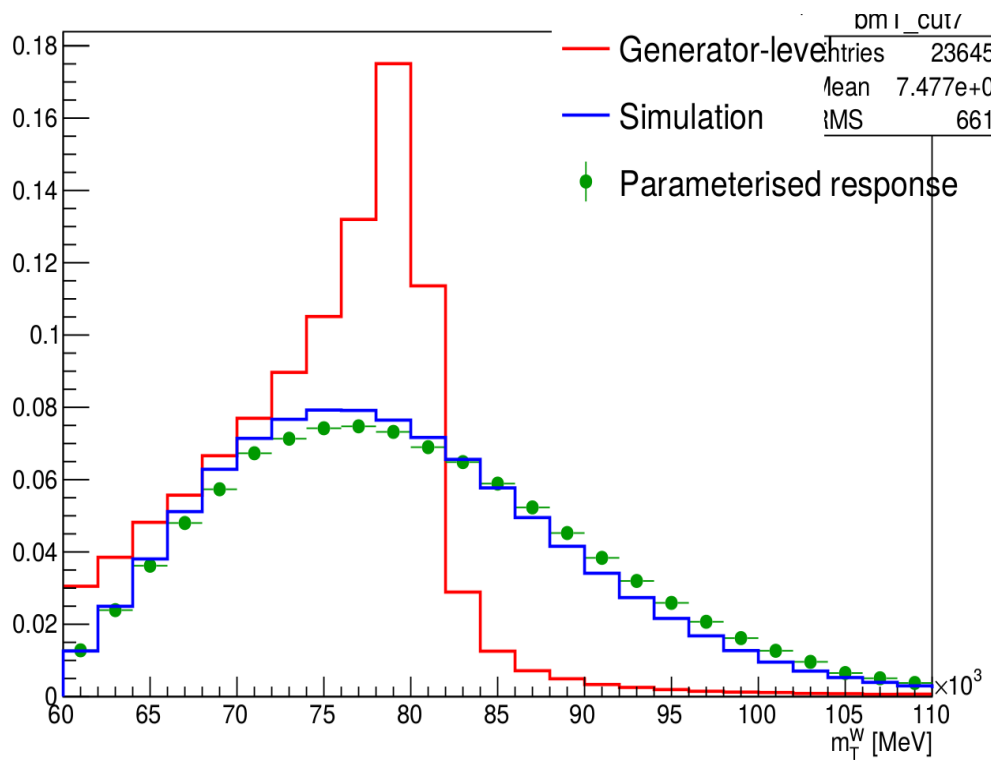


The resolution fluctuates by about 21% of itself

In first order, incorporate effect by drawing $\sigma(p_T)$ from a gaussian distribution of width $0.21 \cdot \langle \sigma(p_T) \rangle$, and smear accordingly

Parametrized smearing at 7 TeV

- Impact of soft SumET fluctuations at given pTV



Parametrized smearing at 7 TeV

- Impact of soft SumET fluctuations at given pTV

