

Figure 01: Dimuon mass resolution at the Z peak as a function of the muon  $p_T$  for BB (left) and BE+EE (right) events. The top plots are for 2017 data and MC, and the lower ones for 2018.

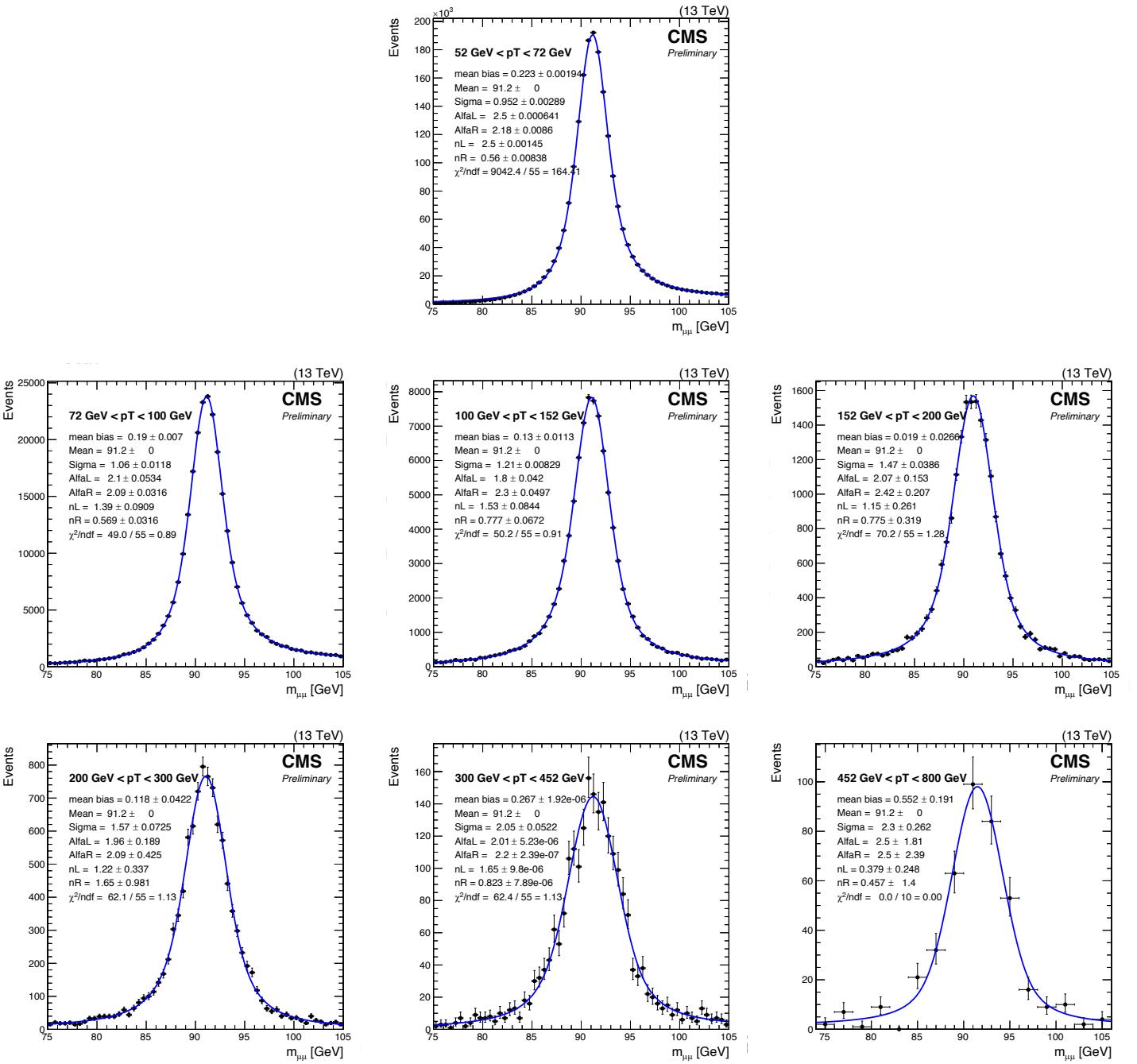


Figure 02: Dimuon invariant mass from data in different  $p_T$  bins used for mass resolution studies at Z peak in the BB category for 2017. The fit parameters is also displayed on each plot.

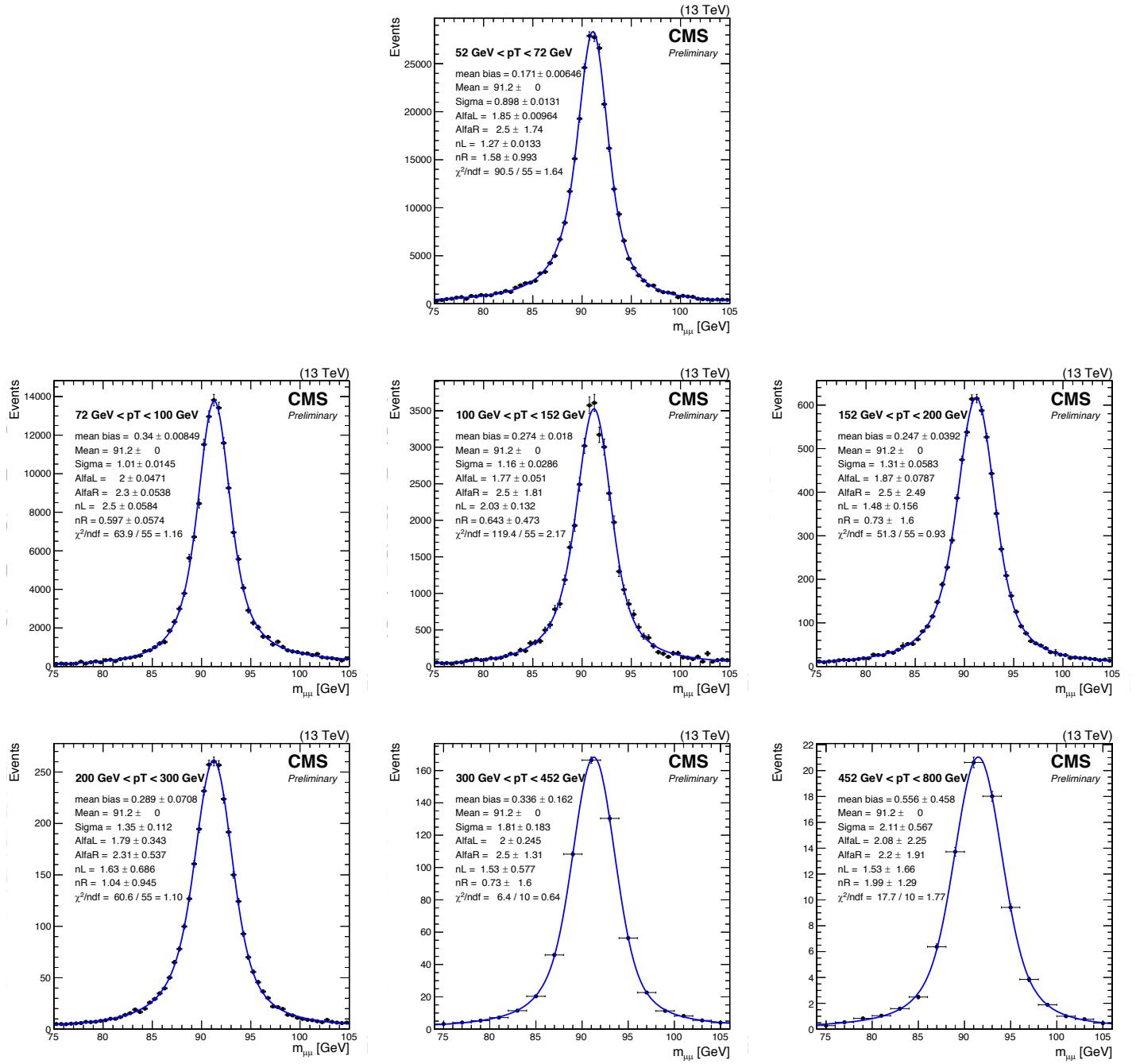


Figure 03: Dimuon invariant mass from MC in different  $p_T$  bins used for mass resolution studies at Z peak in the BB category for 2017. The fit parameters is also displayed on each plot.

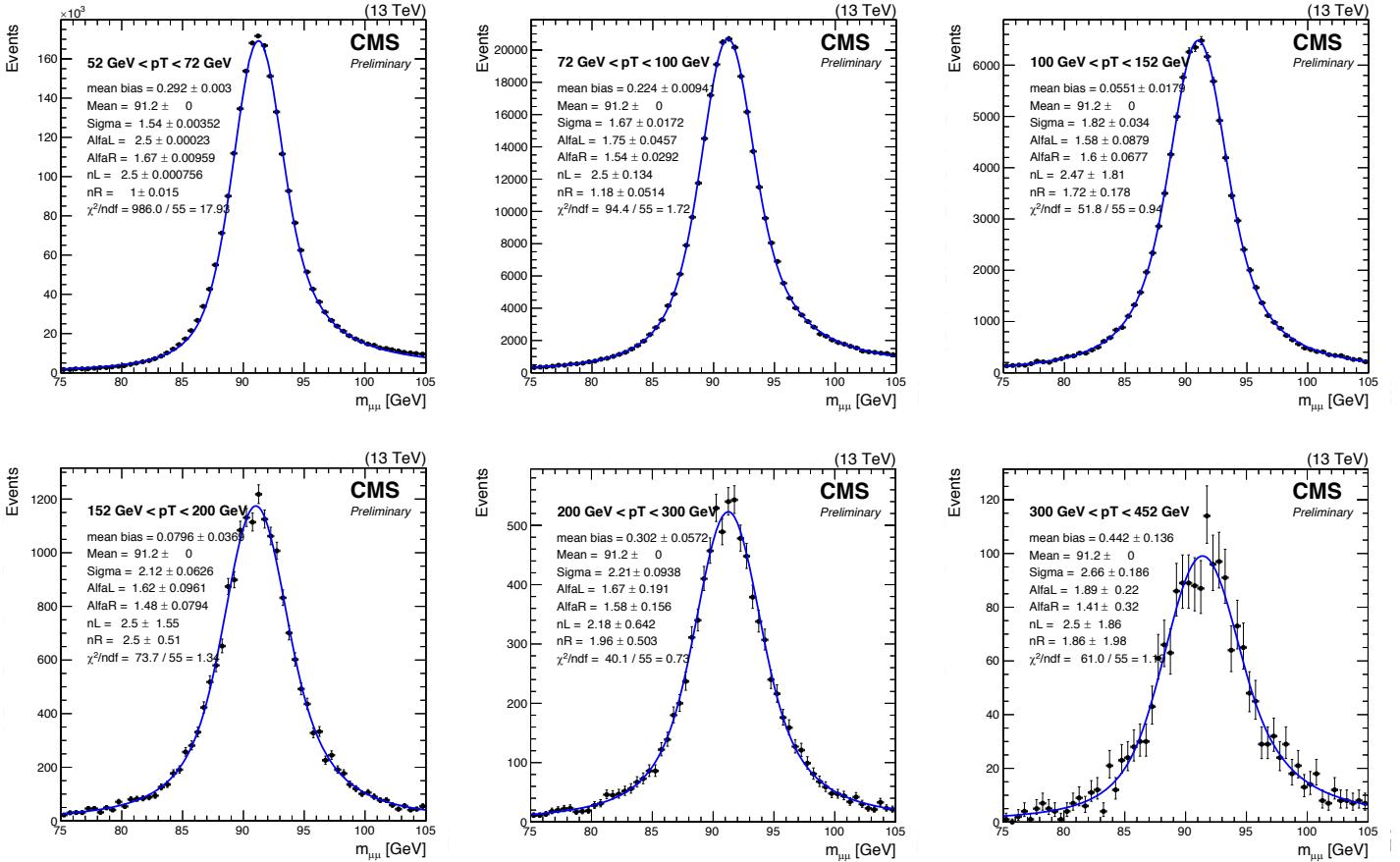


Figure 04: Dimuon invariant mass from data in different  $p_T$  bins used for mass resolution studies at Z peak in the BE+EE category for 2017. The fit parameters is also displayed on each plot.

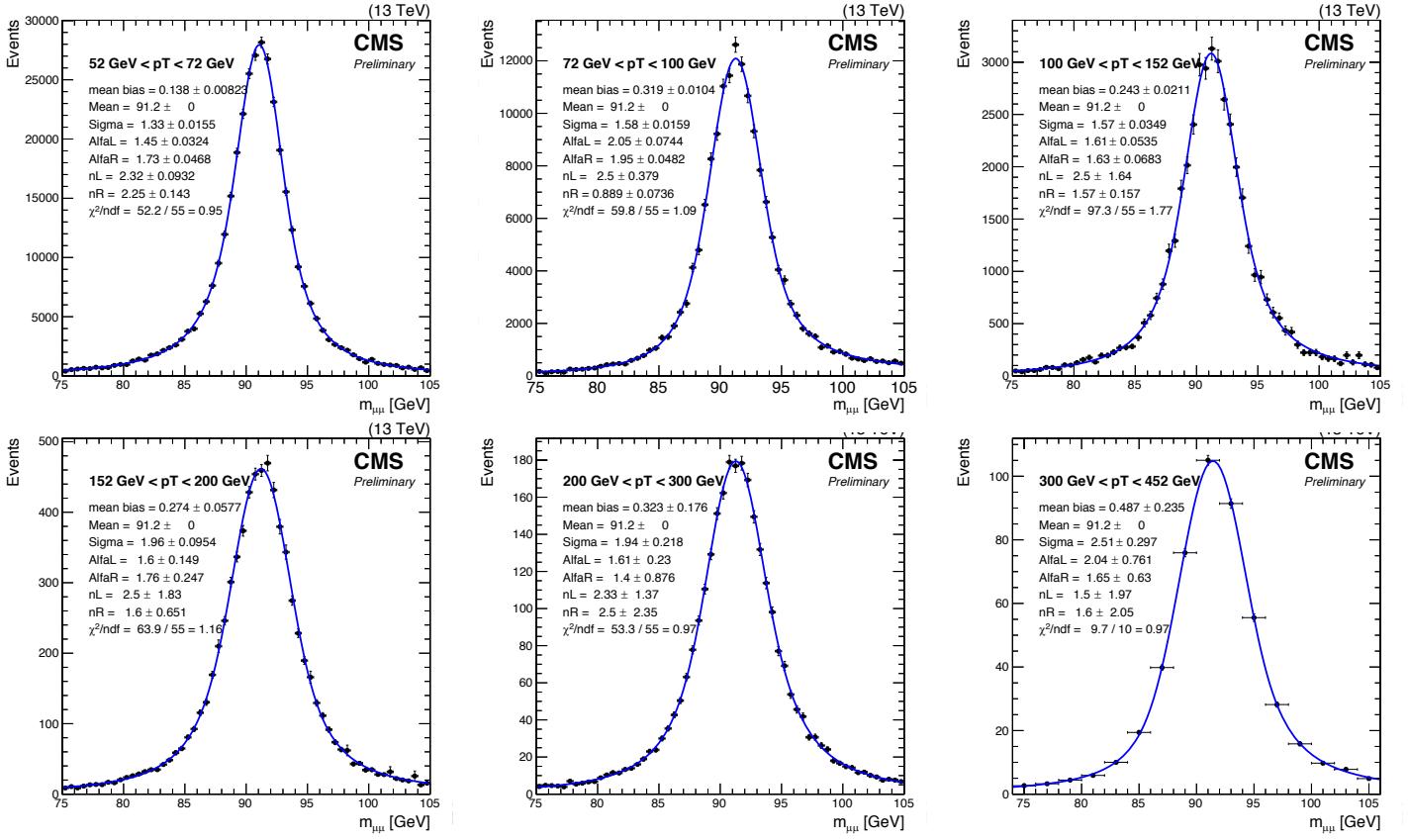


Figure 05: Dimuon invariant mass from MC in different  $p_{\text{T}}$  bins used for mass resolution studies at Z peak in the BE+EE category for 2017. The fit parameters is also displayed on each plot.

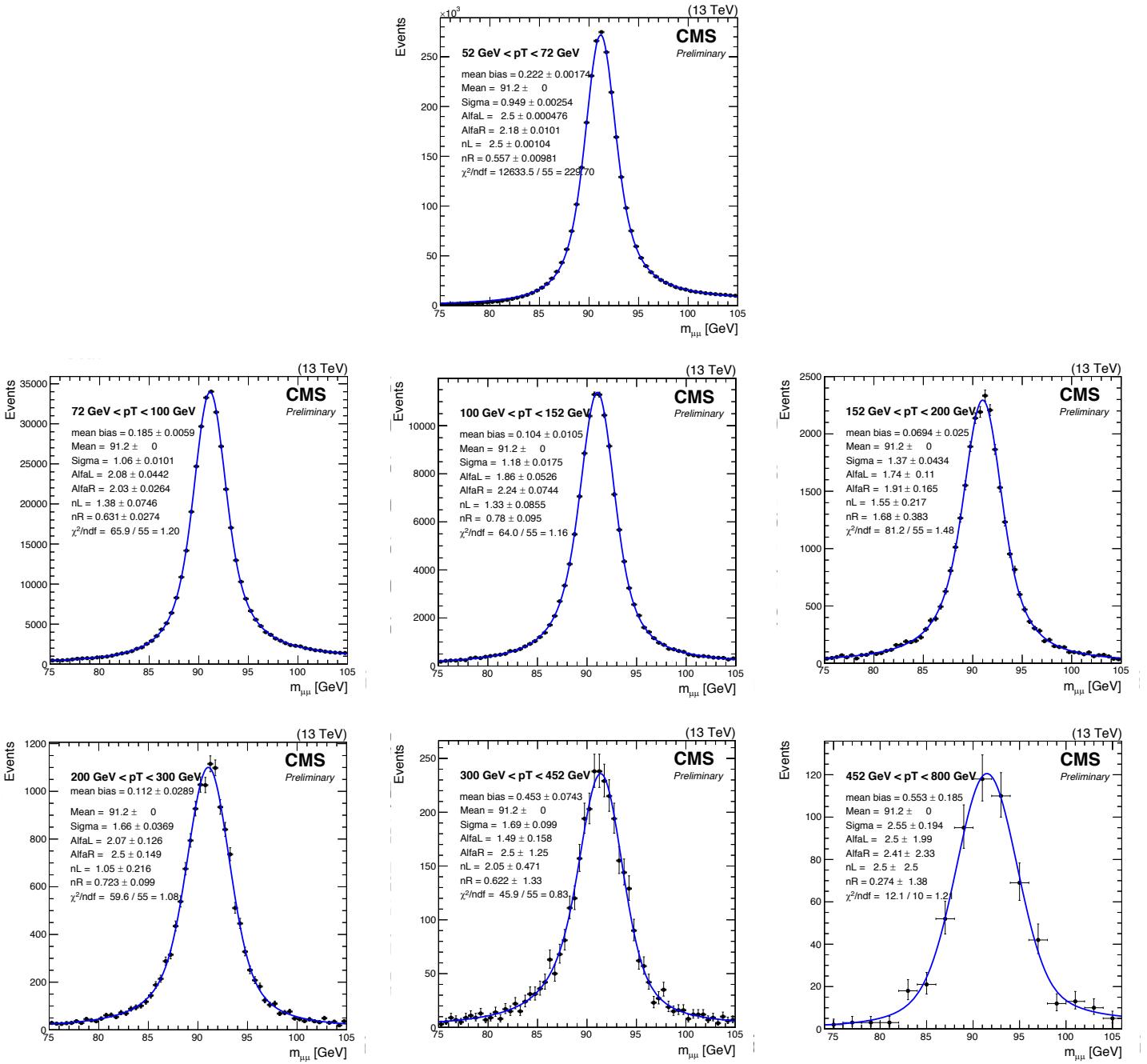


Figure 06: Dimuon invariant mass from data in different  $p_T$  bins used for mass resolution studies at Z peak in the BB category for 2018. The fit parameters is also displayed on each plot.

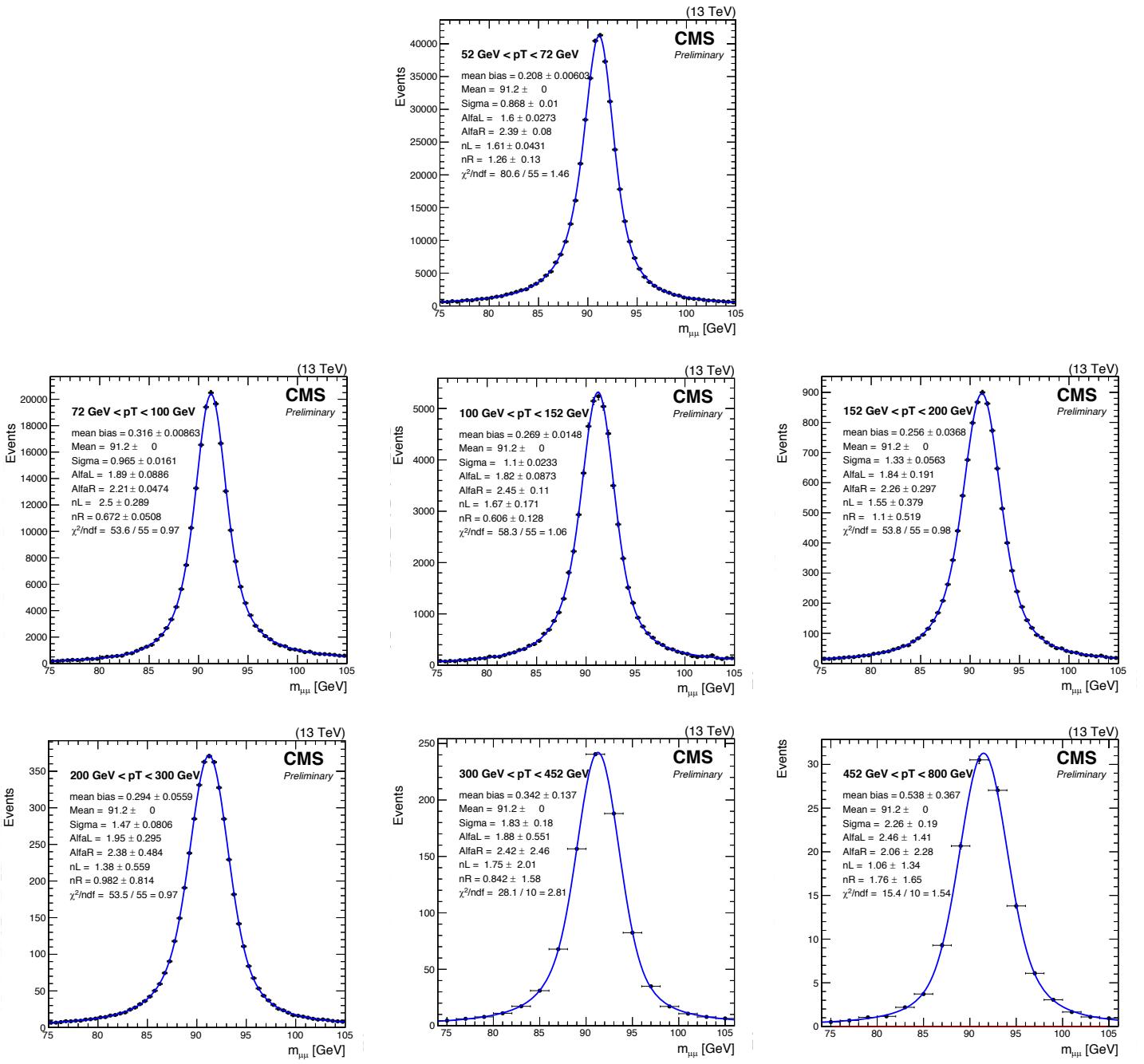


Figure 07: Dimuon invariant mass from MC in different  $p_T$  bins used for mass resolution studies at Z peak in the BB category for 2018. The fit parameters is also displayed on each plot.

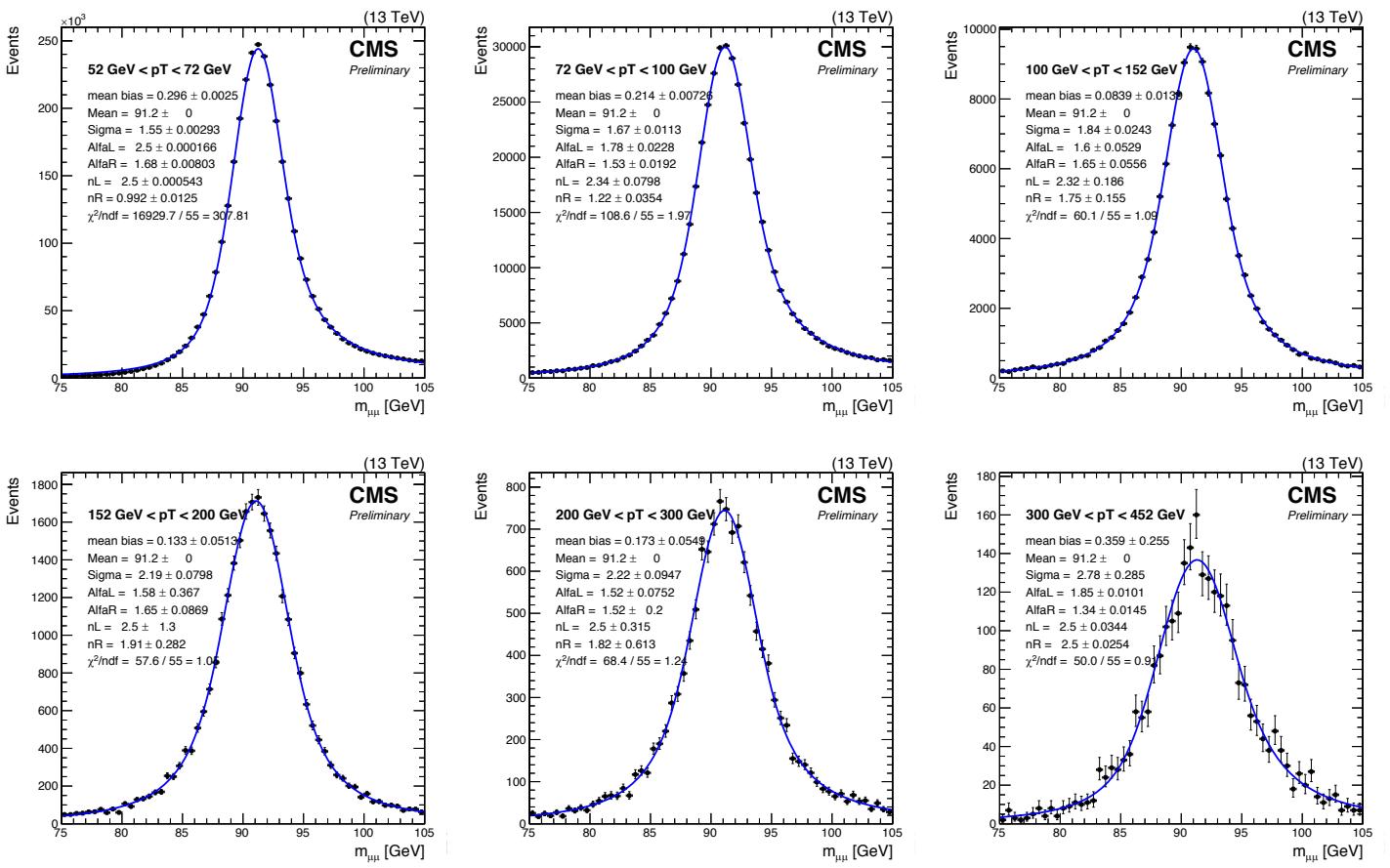


Figure 08: Dimuon invariant mass from data in different  $p_T$  bins used for mass resolution studies at Z peak in the BE+EE category for 2018. The fit parameters is also displayed on each plot.

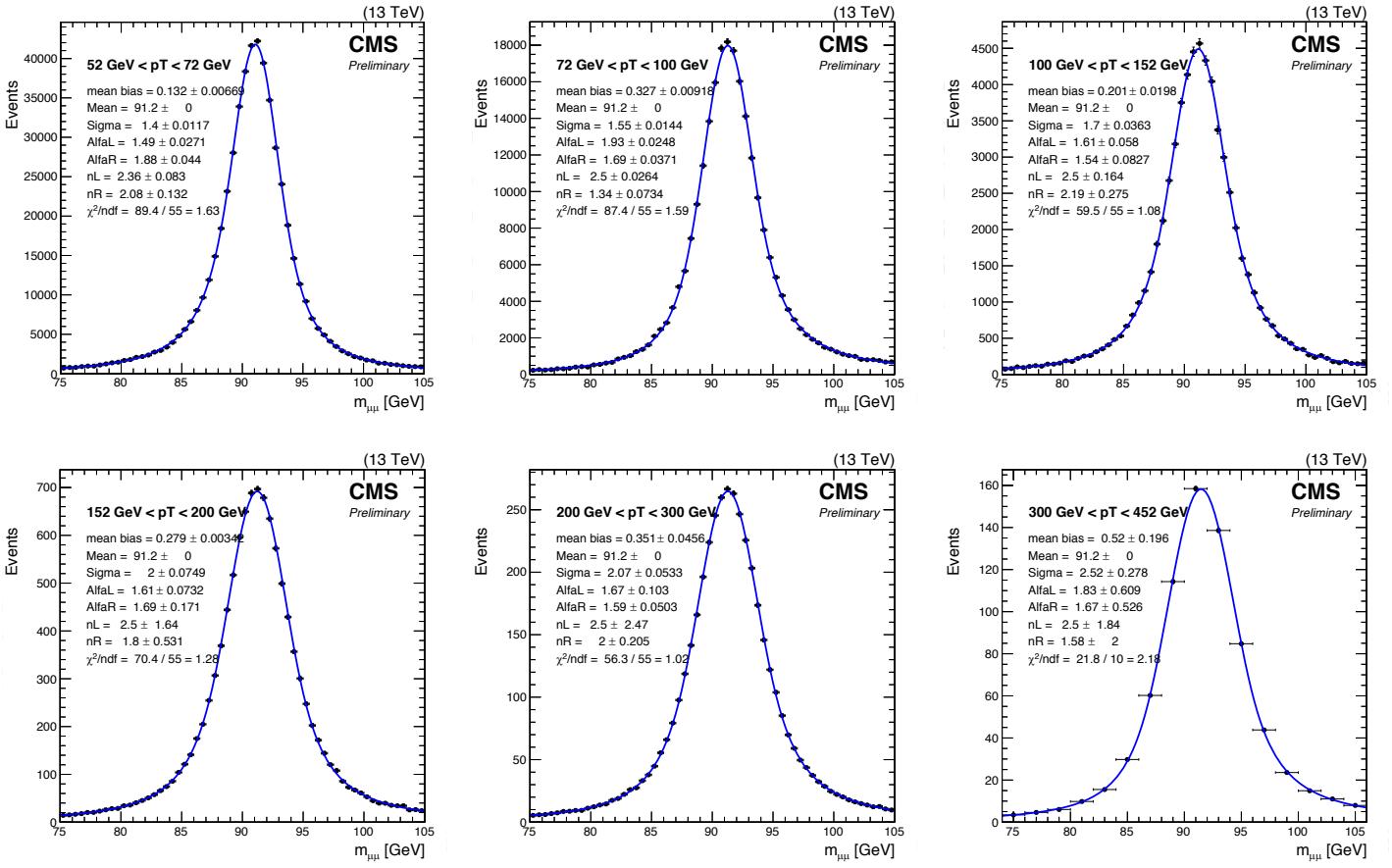


Figure 09: Dimuon invariant mass from MC in different  $p_T$  bins used for mass resolution studies at Z peak in the BE+EE category for 2018. The fit parameters is also displayed on each plot.

