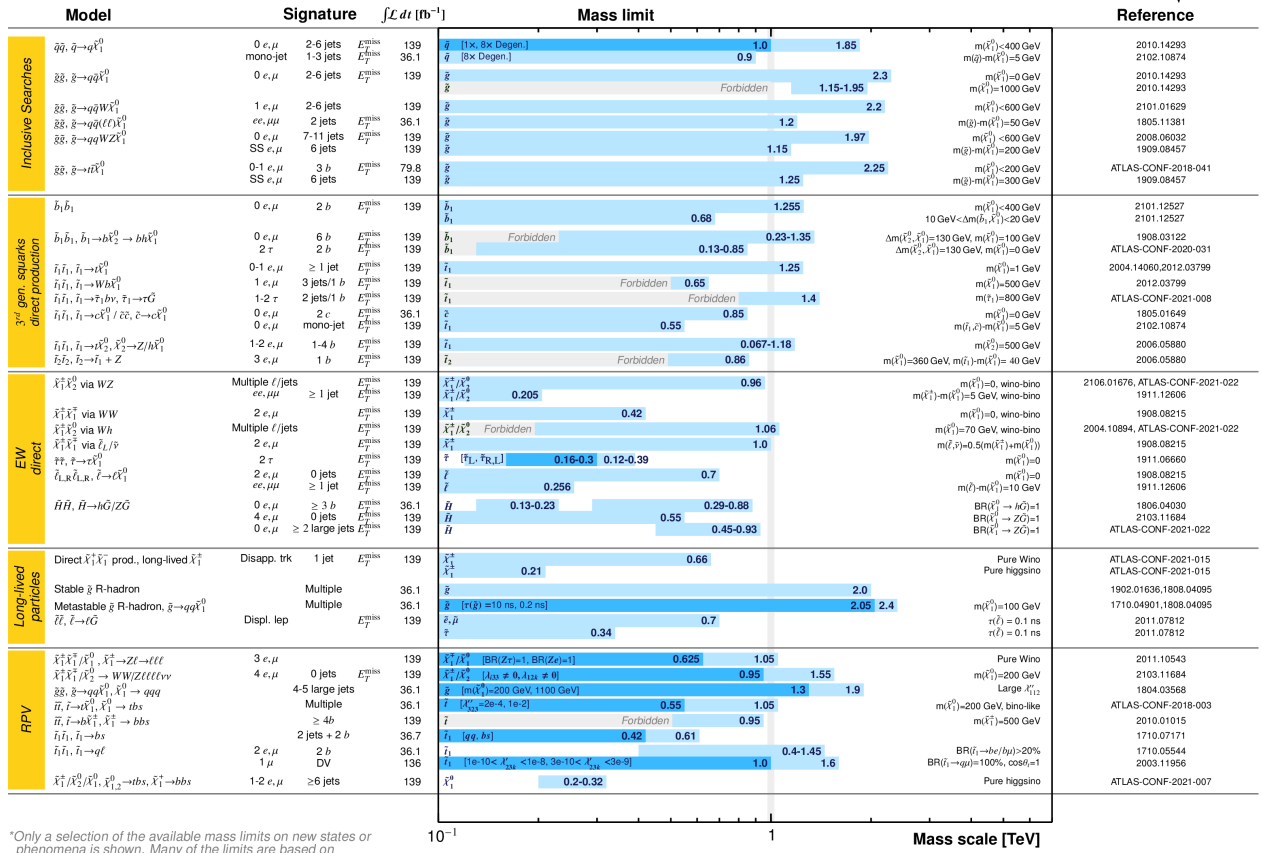


ATLAS SUSY Searches* - 95% CL Lower Limits

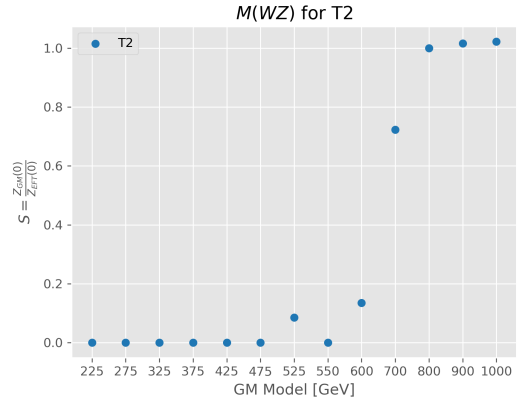
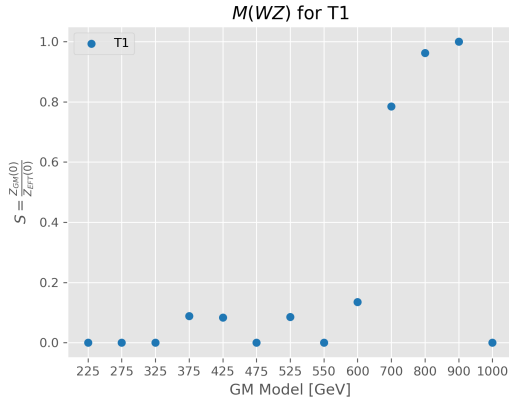
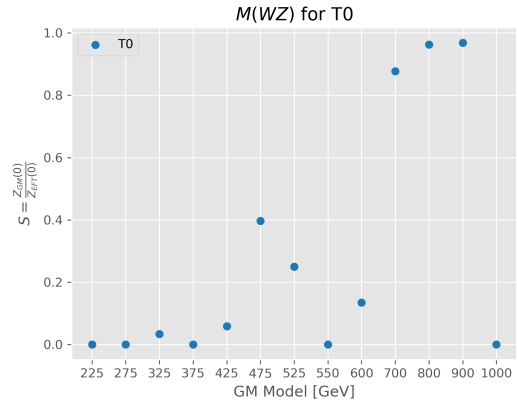
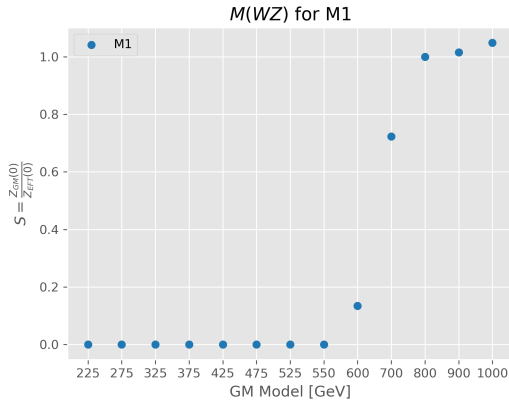
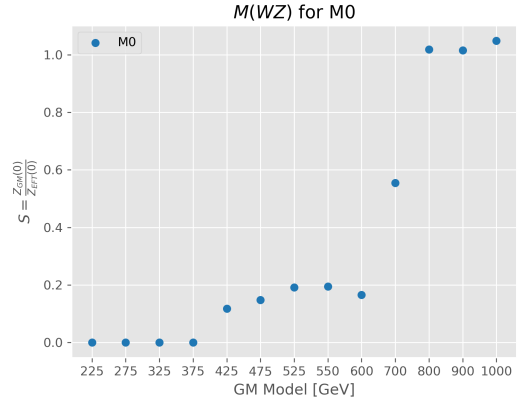
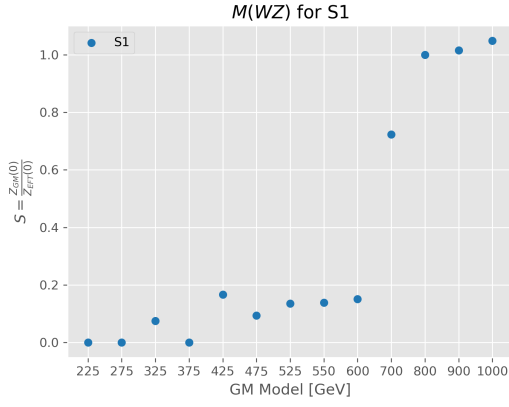
June 2021

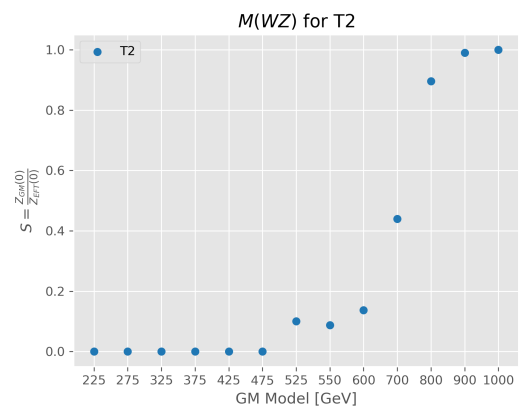
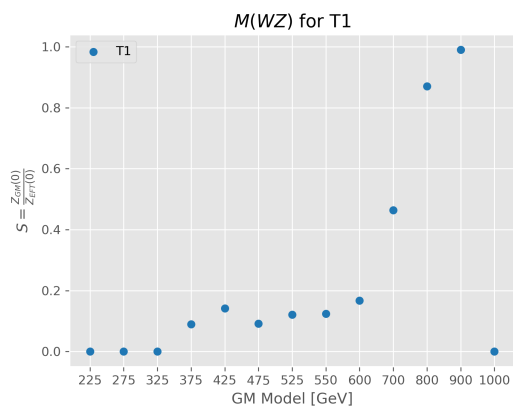
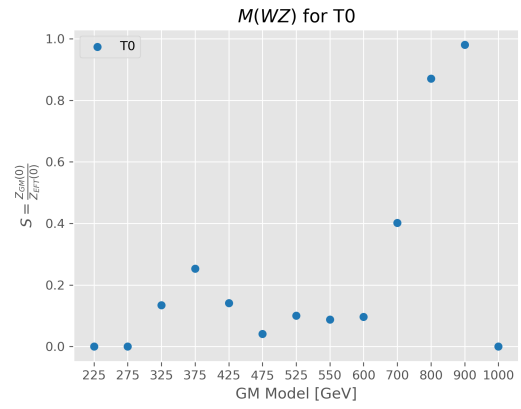
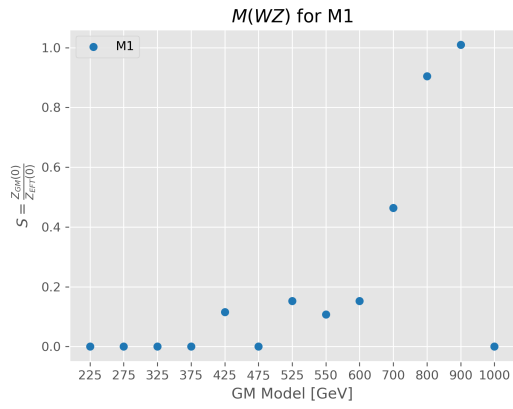
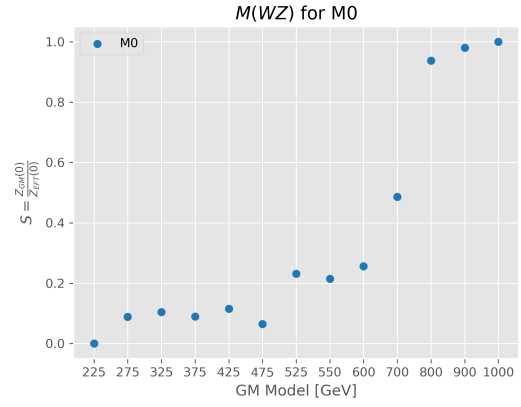
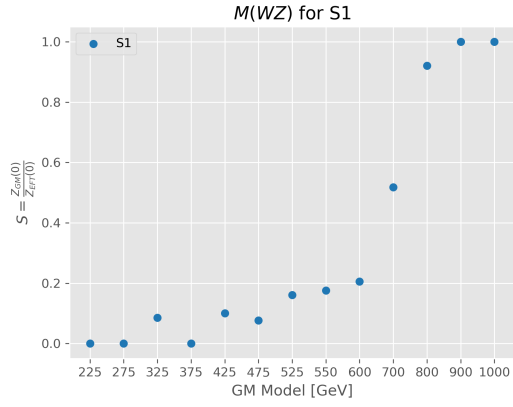
ATLAS Preliminary
 $\sqrt{s} = 13 \text{ TeV}$


*Only a selection of the available mass limits on new states or phenomena is shown. Many of the limits are based on simplified models, c.f. refs. for the assumptions made.

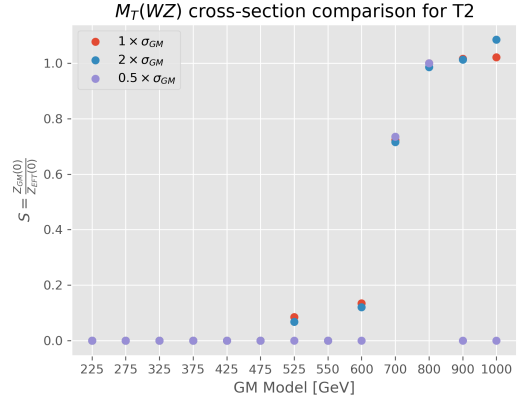
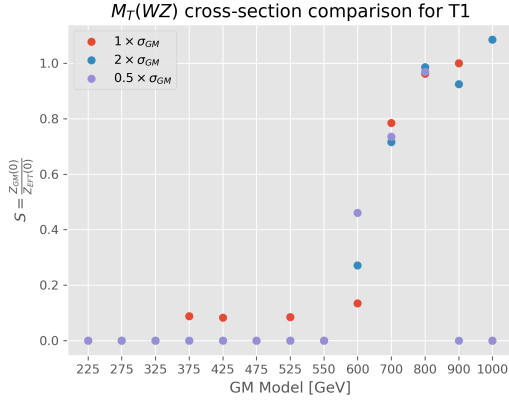
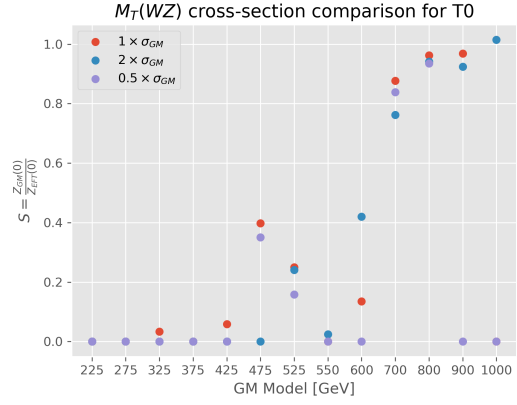
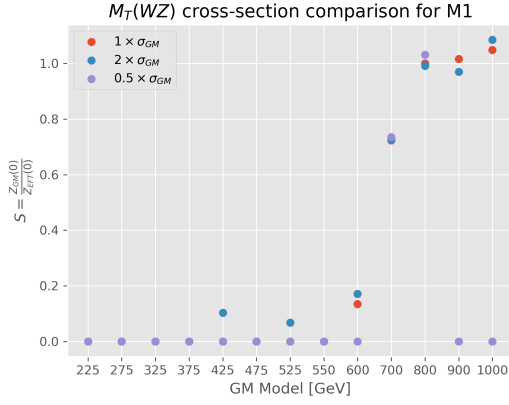
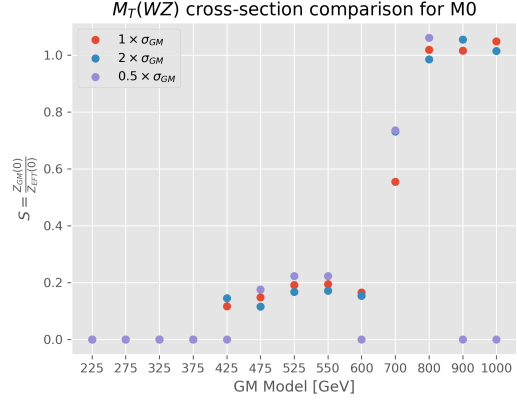
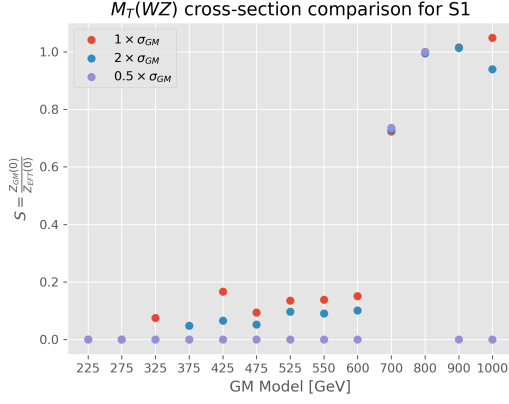
Figure 0.1: Example for SUSY as BSM Model. All particles shown here have been rejected as they should have been found using described methods in BSM search. [1]

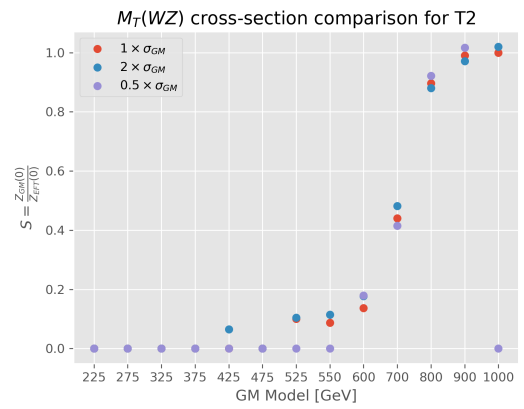
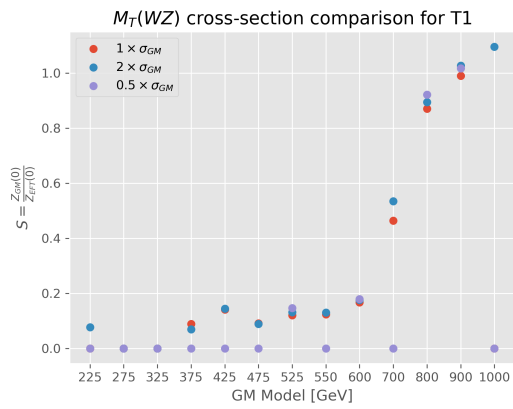
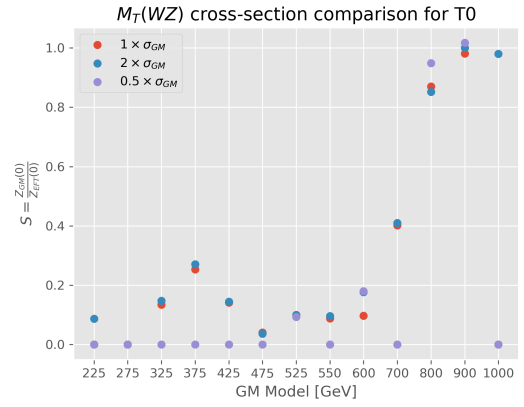
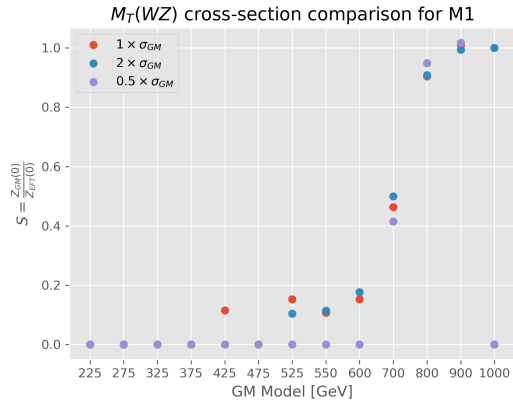
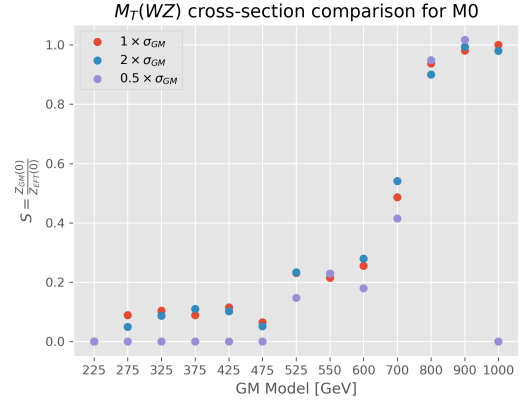
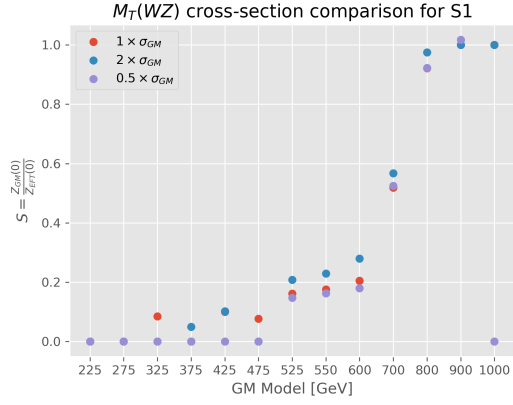
0.1 Significance of dim-8 operators





0.2 Cross-section comparison for dim-8 operators





0.3 Resonances

0.3.1 900 GeV resonance

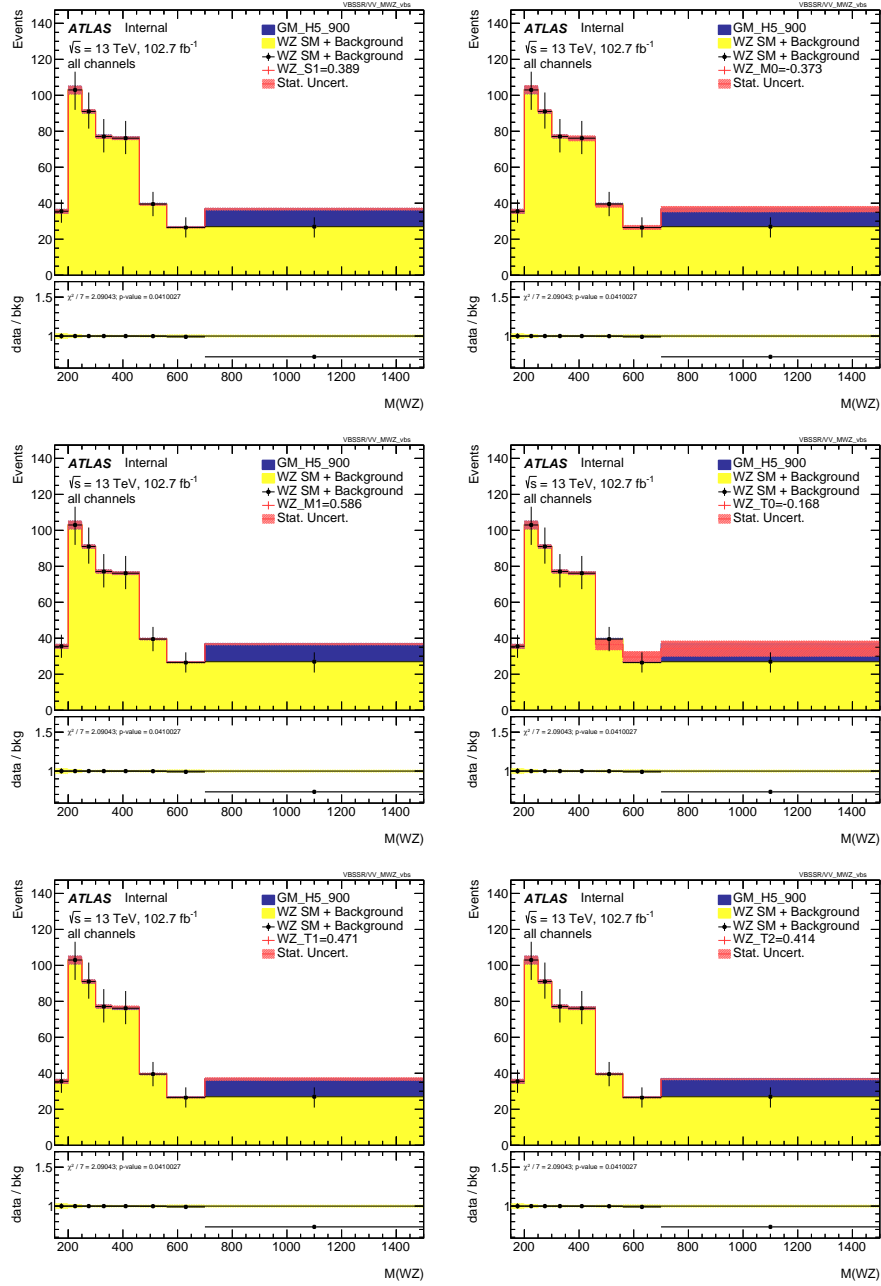


Figure 0.6: Invariant mass for parameters S1, M0, M1, T0, T1, T2 with best fit value for 900 GeV resonance

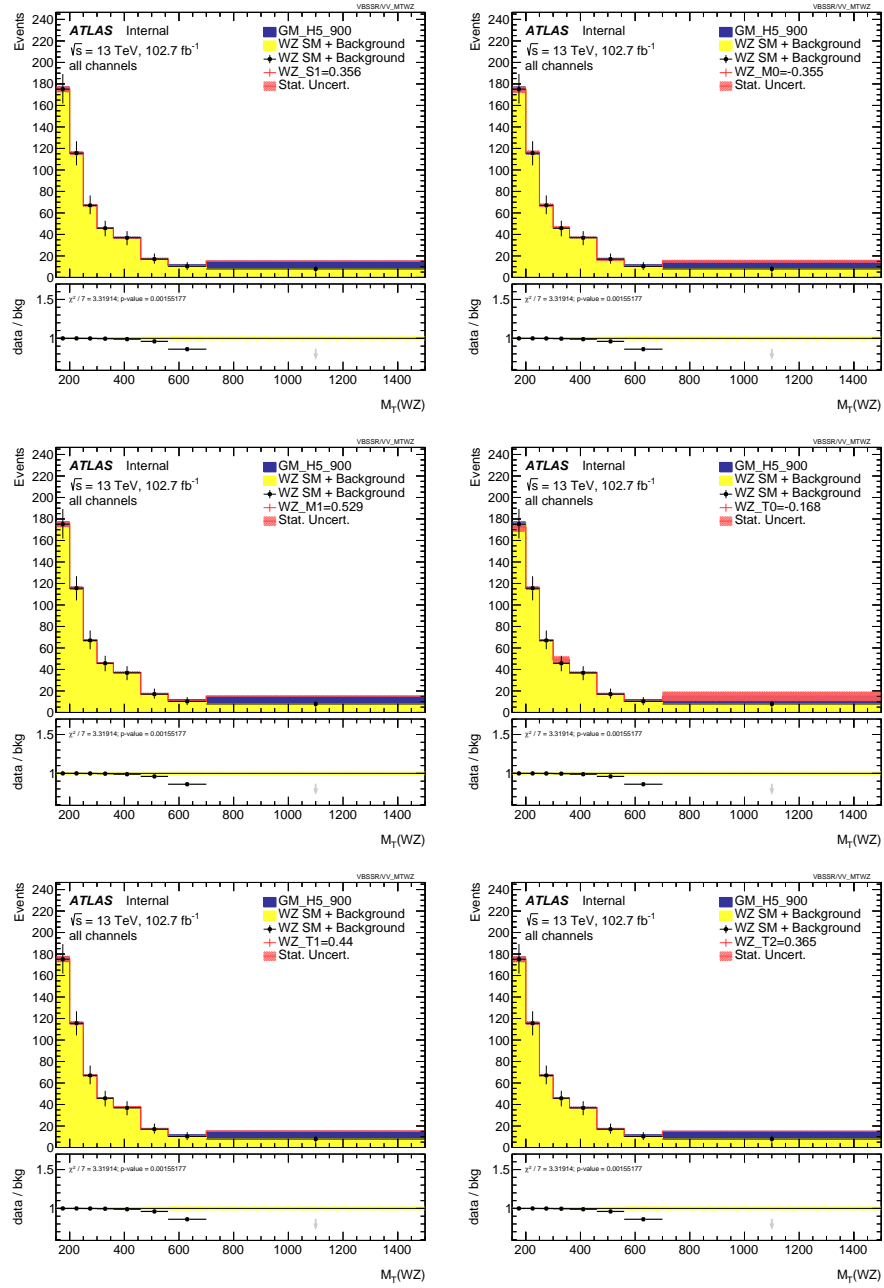


Figure 0.7: transverse mass for parameters S1, M0, M1, T0, T1, T2 with best fit value for 900 GeV resonance

0.3.2 1000 GeV resonance

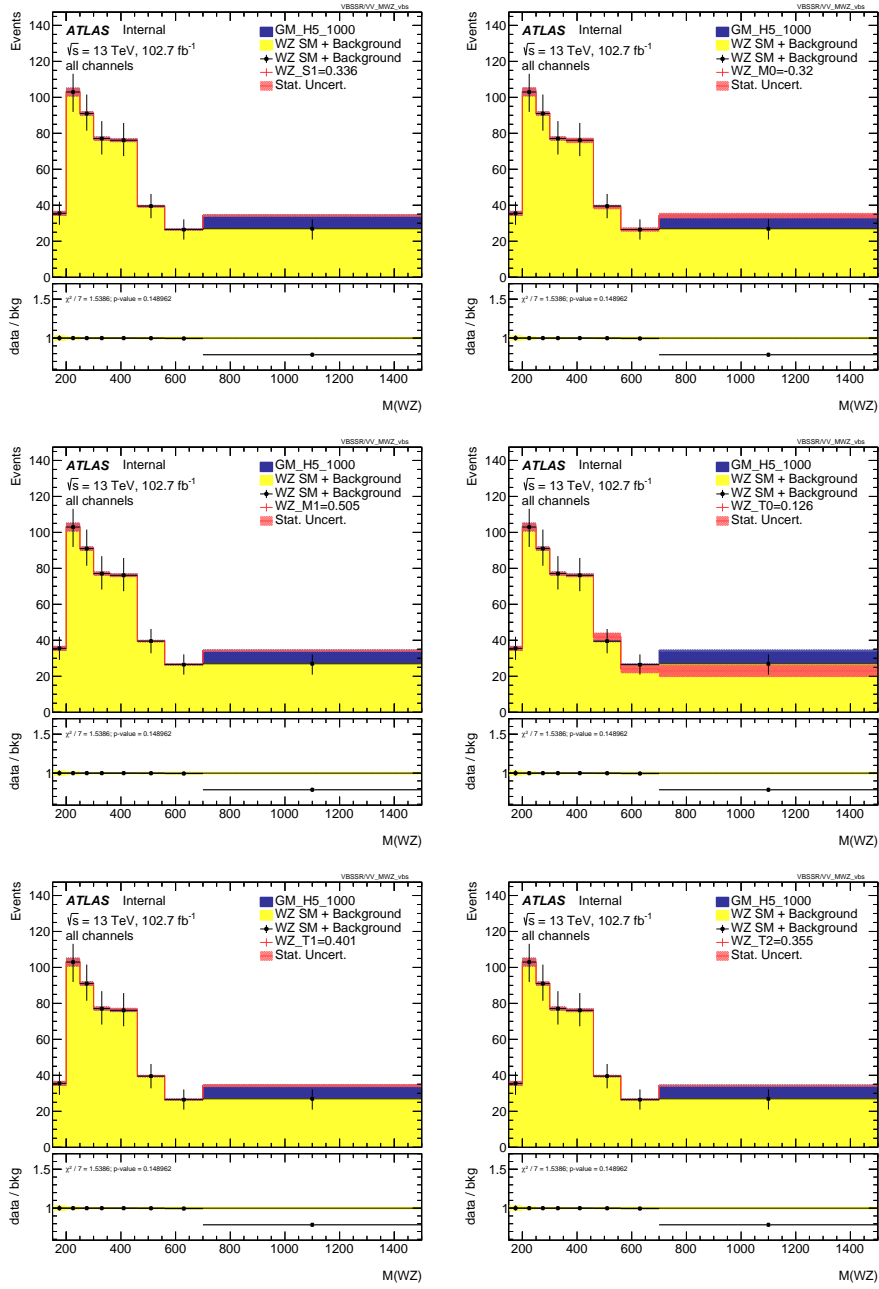


Figure 0.8: Invariant mass for parameters S1, M0, M1, T0, T1, T2 with best fit value for 1000 GeV resonance

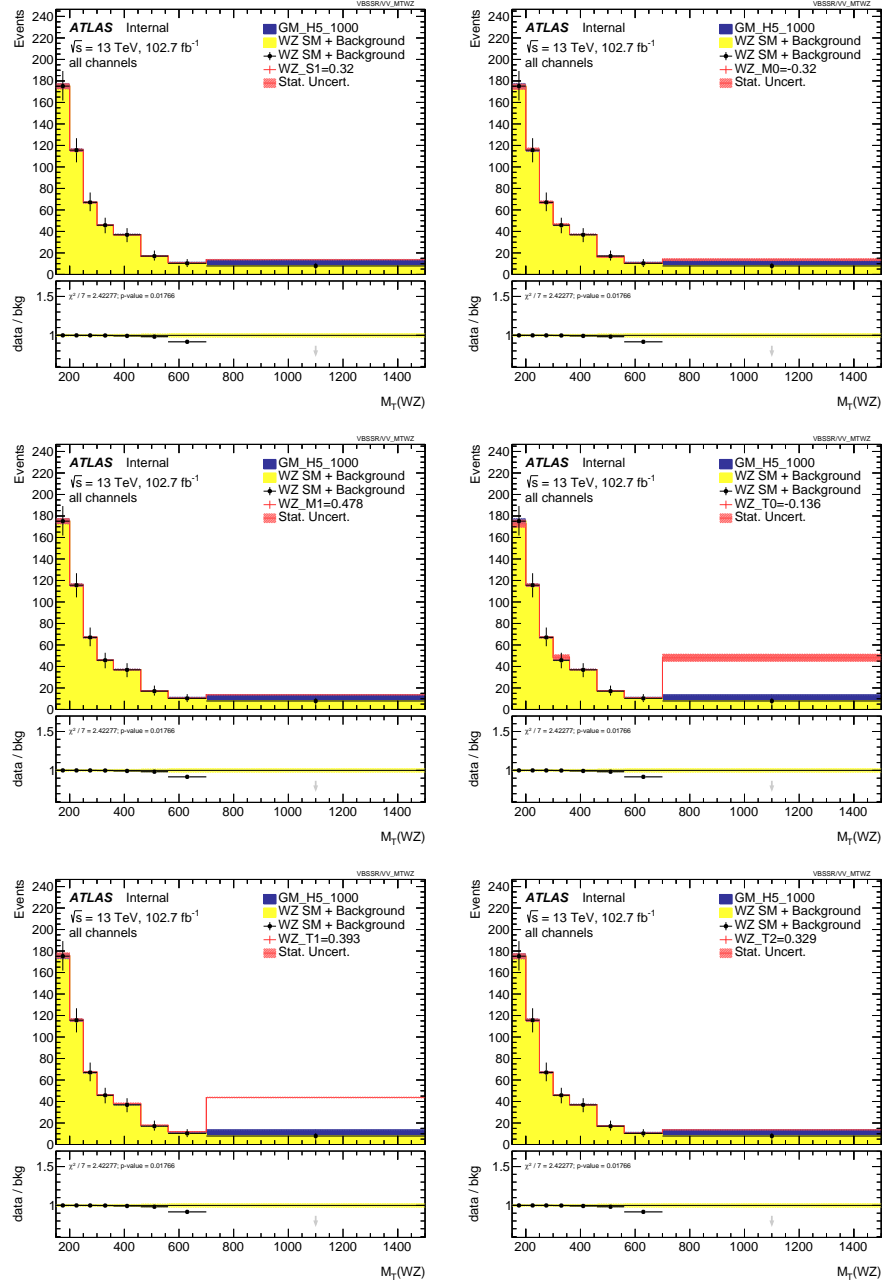


Figure 0.9: transverse mass for parameters S1, M0, M1, T0, T1, T2 with best fit value for 1000 GeV resonance